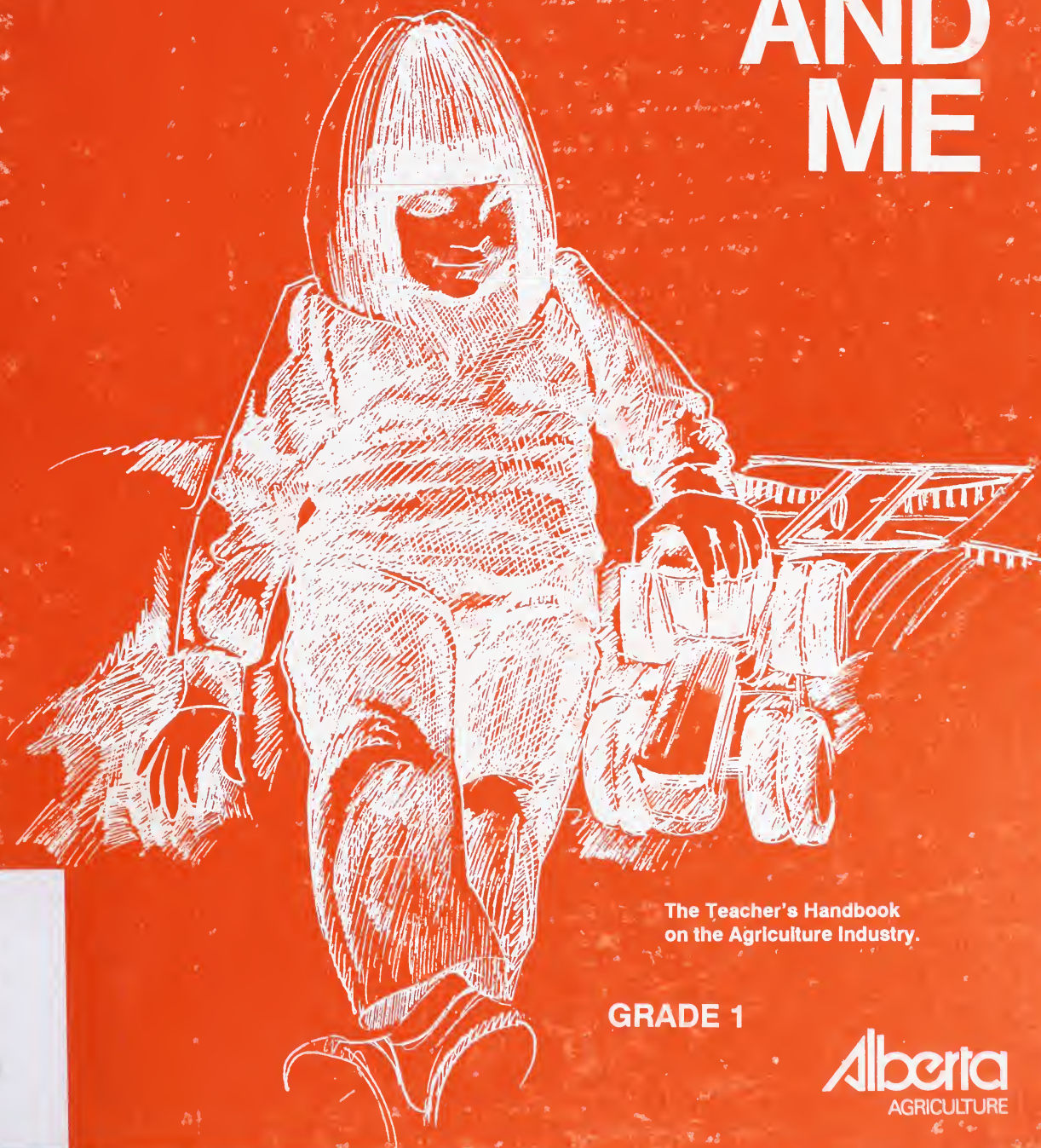


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AGRICULTURE AND ME



The Teacher's Handbook
on the Agriculture Industry.

GRADE 1

Alberta
AGRICULTURE

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1989
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1990 03 3M
For further information
contact:
Ag. in the Classroom Program
427-2402
Alberta Agriculture

JUN - 2 1992

AGRICULTURE AND ME
A Resource Book for Teachers
Division 1

Nadia Hochachka, Writer
1987
Carmen Bibby, Revision

ALBERTA AGRICULTURE
1989

INTRODUCTION TO THE TEACHERS



Mom: (After child's first day at school)
What's the matter?

Child: Well it's not much fun. I can't read;
I can't write; and they won't let me talk!

- Author unknown

The above exchange reveals children's expectations that in school they will learn to read and write and that they will talk.

WELCOME TO THE GRADE
ONE HANDBOOK OF
AGRICULTURE AND ME!



Unlike the child in the above conversation, in all of the activities in Agriculture and Me children are expected to read and write, and most of the activities accommodate and encourage talk as a means of exploring or sharing ideas about agriculture.

THE AGRICULTURE AND ME SERIES

Agriculture and Me is a series of three books for those of you who teach in Division 1. These three handbooks suggest forty-six activities which you can use to help children increase their agricultural awareness. Our aim in preparing the handbooks has been to suggest activities that will be fun for children and will encourage them to begin to develop up-to-date notions of what farming is; also to begin to recognize what else agriculture is, in addition to farming - the network of interrelated services and businesses that are associated with farming. Through the activities children have opportunities to discover the ways in which their lives and welfare are affected by agriculture.

The need for Agriculture and Me stems from the fact that agriculture provides jobs to a significant number of Albertans and it provides essential products and services to all the rest of us, yet many of us are unaware of the scope and nature of the agriculture industry in our province. In addition many of us retain misconceptions about farming.

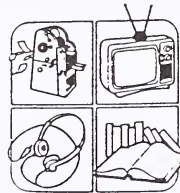
This series is part of a response to these facts. In turn these materials are part of an agriculture-in-the-classroom movement across the continent. The movement originates among farm people and others involved in agriculture whose aim is to help increase awareness about agriculture by providing resource materials for teachers.

While the focus of Agriculture and Me is on agriculture which relates to many social studies and science topics, we have selected activities with children's language development in mind. Our aim has been to suggest activities that allow for extensive use of language, both for learning and for sharing or communication. As well, we intend that the activities allow children to enjoy language and to develop increasing appreciation of and interest in it - attitudes critical to language development itself.

In many of the activities we have suggested group work. This takes into account the increasing amount of educational research that recognizes the essential role of social context in language development. Group work also allows the children to mobilize and refine their own knowledge through talk. Finally of course, group work allows the children to help each other and to develop attitudes of cooperation and acceptance so important in learning and living.

The activities in this series are designed to compliment three of the provincial curriculum guides:

LANGUAGE ARTS



SCIENCE



SOCIAL STUDIES



While we have related the units to the above provincial curriculum guides, which offer separate objectives for grades 1, 2, and 3, the handbooks are flexible resources. You will be able to adapt many of the activities for use with children at any point of development in primary school. This adaptability is consistent with the philosophical framework within which you work; it acknowledges the need for continuity and articulation among various learning experience of young children. The adaptability also is consistent with the fact that you are in the unique position to know what is possible and desirable for your children and comfortable for you in your particular circumstances. In addition, you are free to photocopy any of the materials in Agriculture and Me.

Curriculum Chart

The curriculum chart shows which content areas of Social Studies and Science are emphasized in particular activities; also what types of language arts activities are involved. The wording of the curriculum guides is used in the activity outlines.

Glossary

The glossary lists words by category - e.g. farm plants, farm equipment. Words are alphabetized within each category. We have included some words which are fairly common so as to point out their uses in an agricultural context.

Theme Character



HI THERE EVERYONE!

I am Slide the earthworm

Most of the time, I am processing soil
to help the farmers as they toil.

I am looming out from my home underground
to see where the AGRICULTURE industry is bound.

I have to admit that I have been in the dark
but I hope to put you right on the mark.

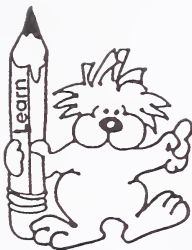
I will wriggle my way through as your guide
to all the new and exciting happenings inside.

author - C.G. Bibby

Activity Outline

The activities in this series have been grouped into nine units. The introduction to each unit offers a brief overview of the theme and general objectives for the group of activities in that unit. Individual activities have been written in a standard way and each one includes the following sections:

1. The Title
2. Study Question
 - a question to focus the activity; try to answer it before going ahead.
3. Subject Area
 - suggests which subject is emphasized in the activity.
4. The Activity
 - a concise statement of what children do.
5. Curriculum Concepts
 - a precise reference to curriculum statements found in your provincial curriculum guides for Language Arts, Social Studies, and Science.
6. Agriculture Concepts
 - suggests what the students will learn about agriculture.
7. Purpose
 - a brief description of the goal behind the activity.
8. Materials Required
 - a list of materials you will need for the activity.
9. Time Required
 - estimated time needed to complete the activity.
10. Procedure
 - a brief description of suggested steps to follow in introducing, carrying out, and concluding the activity; marginal notations highlight the steps and reflect the curriculum areas.
11. For Discussion
 - a brief list of questions that can be used in a discussion.
12. Evaluation Strategies
 - suggests methods of evaluation; the following two strategies, which stem from a focus on children's language development, apply to all the activities.
 - observe children's reactions and responses during the discussion.
 - observe the changes in the children's language during the activities (vocabulary - new words and phrases/ ideas - how they have changed).
13. Related Activities
 - additional activities that grow out of the main activity but may require additional resources as well as time.
14. Resource Sheets
 - resource material for student and teacher use:
 - pictures
 - information sheets which provide some background for the activities
 - samples of student activity sheets



symbol that marks
all student
resource material



symbol that marks all
information sheets or
other material for the
teachers

NOTE:

There are french student resource sheets corresponding to five of the activities that are provided in this book. You will find these sheets at the back under "Appendix B".

ALBERTA AGRICULTURE RESOURCES

Please contact the following address' for further information.

Agriculture Education Branch - Teacher Handbooks

Agriculture in the Classroom Program
Second Floor, J.G. O'Donoghue Building
7000 - 113 Street
Edmonton, Alberta
T6H 5T6
TELEPHONE: 427-2402



Information Services Division - Alberta Agriculture Information

Alberta Agriculture
Publications Office
Main Floor, J.G. O'Donoghue Building
7000 - 113 Street
Edmonton, Alberta
T6H 5T6
TELEPHONE: 427-0391



Information Services Division - Audio-Visual Material

Alberta Agriculture
Film Library
Main Floor, J.G. O'Donoghue Building
7000 - 113 Street
Edmonton, Alberta
T6H 5T6
TELEPHONE: 427-2127



FINAL COMMENTS

The preparation of Agriculture and Me has been an enjoyable way of reinforcing our awareness of the central place of agriculture in the lives of all of us in Alberta. We hope that you find these activities useful and that you enjoy doing some of them with your students. We look forward to your comments on this series.

ACKNOWLEDGEMENTS

In writing these handbooks I have received help from a large number of people. Though space does not allow me to specify each person's contribution, I would like to at least mention the people whose support I have valued so much.

First I want to thank Warren Wismer and Betty Gabert for the opportunity to work on this project that I endorse so strongly. As well, I want to thank Dr. Grace Malicky of the University of Alberta who put me in touch with Alberta Agriculture and thereby initiated an association that has been very interesting and enlightening for me.

I want to thank Betty Gabert not only for bringing me into the project but also for being the best kind of editor I could imagine. She has understood my needs and responded to them directly and thoughtfully. She has given me suggestions and perceptive criticism, which reflect her very comprehensive understanding of our project and of the perspective of teachers in classrooms. And she has demonstrated faith in me. Her leadership and collegiality have made my work productive and very pleasurable.

Another colleague who has offered steady support is Gabe Boulet. I have appreciated his thorough responses to my questions about agriculture, and I have enjoyed the many talks in which my questions led to fascinating explorations about agriculture. These discussions have fed both my writing and my enthusiasm.

I appreciate the staff I have worked with at Alberta Agriculture, especially Joyce Gingerich whose endless patience and good humor and her skill on the word processor have allowed me to move easily through a number of drafts of these handbooks.

Several teachers have been generous enough to read parts of my drafts and to offer comments from a classroom perspective. That was essential, and I have appreciated it very much.

While working on these handbooks I visited a number of farms around Edmonton. I appreciate the generosity of the farm people who shared their time and their experiences with me. I also greatly appreciate the co-operation of a number of people in agriculture who arranged for or prepared material about life on various types of farms.

Finally I want to thank my friends and family members who have generously offered suggestions and information as well as continual encouragement. Their curiosity, their prompts, and their praise have helped make this project a tremendous delight for me!

N.H.
December, 1986

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| 2. A Threshing Competition | 2.1 |
| Children separate seeds from their heads. | |
| 3. Germinating Seeds | 3.1 |
| Children sprout grain seeds. | |
| 4. Who's Been Making My Porridge? | 4.1 |
| Children identify grain products they eat every day. | |
| 5. Stocking the Cupboard - and the Fridge | 5.1 |
| Children identify common products used in their homes. | |
| UNIT 2 - FARM FAMILIES | |
| 6. Family Scenes | 6.1 |
| Children dramatize aspects of family life on farms. | |
| 7. Old Macdonald - New Macdonald | 7.1 |
| Children will compose a revised version of the popular song Old MacDonald Had a Farm. | |
| 8. Sounds of Farming | 8.1 |
| Children identify some of the sounds characteristic of a rural farm setting. | |
| 9. Farm Cat, City Cat - A Very Special Cat | 9.1 |
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| Children identify and count numbers of animals on picture cards. | |
| 13. Guess the Animal | 13.1 |
| Children guess the animals in dot puzzles and write the names. | |
| 14. Animal Health Care | 14.1 |
| Children identify a few principles of health care for farm animals. | |
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| Children make individual models of their farm animals and display them in a classroom simulation of a country fair. | |
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LIST OF RESOURCES

UNIT 1 - HARVEST

Grains of Alberta (Diagrams)
Data Sheet for Field Trips
Agriculture Words (Word Completion)
Harvesting in Alberta (Pictures)
Seeds (Information Sheet)
Minimal Cues Messages About Germination
My Breakfast (Log)

UNIT 2 - FARM FAMILIES

Family Life on a Farm (Sketches)
Modern Farms (Pictures)
Sounds of Farming (Imaging Script)
Barn Cat, House Cat: Personality Profiles

UNIT 3 - FARM ANIMALS

Hatching Chicks (Information Sheet)
Hatching Chicks Mechanically (Sketches)
Hatching Chicks Naturally (Sketches)
Number Cards: Animal Babies
Animal Riddles and Rhymes
Farm Animals (Pictures)
Can You Name These Animals? (Dot Puzzles)
What Do You Do to Stay Healthy? (Notemaking Sheet)



CURRICULUM

CONNECTION

AGRICULTURE & ME - DIVISION 1 - GRADE ONE

| Lesson Title | Subject Area | Curriculum Connection | Major Agricultural Concepts | Language Arts Skills |
|---|----------------|--|---|--|
| Unit One | | | | |
| 1. Examining Seeds | Science | Observe characteristics of seeds. | Ripening; seed as a living thing. | Follow directions make comparisons. |
| 2. A Threshing Competition | Science | Identify changes in the environment resulting from man's activities. | Harvest; time as a factor in harvesting. | Follow directions; read an experience chart. |
| 3. Germinating Seeds | Science | Observe and describe stages in the growth of a plant. | Germination as a stage in plant growth; moisture as a condition of germination. | Observe and describe a sequence of events; read an experience chart. |
| 4. Who's Been Making My Porridge? | Science | Name and classify sources of energy. | Grain as a source of food; food as a source of energy. | Record experiences; classify; identify words in context. |
| 5. Stocking the Cupboard and the Fridge | Science | Describe and classify plants. | Vegetables as food; food processing. | Identify words in isolation; classify. |
| Unit Two | | | | |
| 6. Family Scenes | Social Studies | Me in my family; Canadian families. | Child as part of team in farming. | Read pictures; identify details; dramatize an event. |
| 7. Old Macdonald - New Macdonald | Social Studies | Canadian Families | Specialization; change; farm. | Identify details; make comparisons; identify words in context; write stories (song). |
| 8. Sounds of Farming | Science | Develop an awareness of and sensitivity to the environment. | Sounds and smells as aspects of farm objects | Attend to task; practise listening; form sensory images; express feelings. |

AGRICULTURE & ME - DIVISION 1 - GRADE ONE

| Lesson Title | Subject Area | Curriculum Connection | Major Agricultural Concepts | Language Arts Skills |
|--|---------------|--|--------------------------------------|--|
| Unit Two (cont'd) | | | | |
| 9. Farm Cat, City Cat - A Very Special Cat | Science | Describe and classify animals. | Animals as pets; animals as workers. | Read charts; make comparisons; dramatize an event (puppets). |
| 10. Alphabet Search: Farm Life | Language Arts | | Farm; farming. | Read pictures; develop vocabulary; use phonic structural analysis. |
| Unit Three | | | | |
| 11. Hatching Chicks | Science | Describe changes in the environment resulting from man's activities. | Mechanization; hatching. | Read pictures; write explanations. |
| 12. Animal Babies | Language Arts | | Farm animal; animal babies. | Read pictures; read numbers; identify words in context. |
| 13. Guess the Animal | Language Arts | | Farm animals. | Follow directions; identify details; record predictions |
| 14. Animal Health Care | Science | Appreciate importance of providing care for living things. | Animal health; health care. | List experiences; read an experience chart; make comparisons. |
| 15. Country Fair | Science | Describe animals. | Country fair; farm animal; exhibit. | Report experiences and information. |

UNIT 1 - HARVEST

INTRODUCTION

The theme for this group of activities is that changes in the colour of plants in nature are a sign that the plants are maturing, that seeds and fruits are ripening. The activities in this unit are intended to help children understand these changes and the farm activities associated with them. In addition, the activities are intended to introduce food processing and to demonstrate the extent to which our eating patterns depend upon farming and its service industries. The activities grow out of the following questions:

1. How do we depend on farming?
2. Who else besides farmers is involved in getting food to us?
3. What roles do we play in food use, production, and processing?

OBJECTIVES

1. To examine seeds or kernels in relation to heads or ears.
2. To develop the concepts of threshing and harvesting.
3. To understand the importance of time in harvesting.
4. To identify common grain and vegetable products in the home.



Activity 1



EXAMINING SEEDS

STUDY QUESTION:

How many seeds are in one head of grain?

THE ACTIVITY:

In this activity children examine individual seeds of grain and count the number of seeds in heads of grain, pods of legumes, or ears of corn.

SUBJECT AREA:

Science

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Listen to directions.

Develop thought processes: make comparisons.

Use appropriate forms of written language: record experiences.

SCIENCE

Plants: observe characteristics of seeds.

AGRICULTURE CONCEPTS:

Ripening: seeds as a living thing.

PURPOSE

To introduce children to the concepts of maturing, living seeds and to different types of seeds grown in Alberta and counting objects.

To give children the opportunity to develop their language skills while learning about seeds.

MATERIALS REQUIRED:

A few stems of grain for each child. (Other seed-producing plants such as corn, beans or peas can be used if grain is not accessible.)

Diagrams of heads of grain. Supplied in this activity. (See also information sheets on crops of Alberta - Activity 27, Book 3.)

Student data sheet for field observations and task sheets on grain. Supplied in this activity.

TIME REQUIRED:

1 to 2 class periods.



PROCEDURE

Part One

Introduction

Bring in the necessary grain and ask the children how they think that it got like it is now so as to start a discussion on grain and seeds.

Part Two

Examining

Examine the diagrams of grain, noting the details of seeds on the heads of grain. Give each child a stem of grain. Ask the children to count the

Counting

numbers of seeds in their individual heads of grain and to note their color.

NOTE:

If grain is not available use pods of peas or beans, cobs of corn, or stems of a wild grass. Relate them to grain by referring to the diagrams of grain stems. See also the information sheet on crops of Alberta.

Part Three

Recording

Have each child write his or her number on the board, along with the color of the seeds and head. Compare numbers, noting variations, and note the colors listed.

Part Four

Conclusion

Discuss the results briefly, emphasizing that each plant grows from a single seed but that the number of new seeds varies. Note also the significance of color as a sign of ripeness - readiness for harvest by comparing grain to other things (corn, tomatoes, etc.).

FOR DISCUSSION

What color is ripened grain?

What color is growing grain?

Do other things change color as they mature?

Why does the grain turn color?

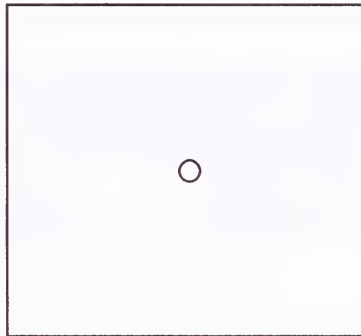
EVALUATION STRATEGIES

Use the observation sheet and the two task sheets as a method of evaluation.

Ask children to do a short write-up with pictures using new agriculture words they learned.

RELATED ACTIVITIES

1. Make a trip to a grain field to collect the stalks of grain for this activity. Back in the classroom, make an experience chart about the grain or have the children use the data sheet to record individual observations about the field - simple printed observations or drawings or a combination. Save the data sheets for a field trip in another season.
2. Take a walk to the same grain field in another season. Use the original data sheet for recording. Compare field conditions in different seasons. Relate these observations to farm work and to life on a farm.
3. Make a simple pin-hole camera for each child, using a sheet of heavy paper or a large card:



Use these to view a tree outside the window or an object in the room. Relate this activity to the idea of focusing in on a single stalk in a field of grain.

The closer an object the more it will be in focus or seem to be enlarged.

TEACHER RESOURCE



THE SAD SEED

One day as Slide the earthworm was wriggling through the dirt he noticed one little seed that was crying.

Slide asked, "What's the matter little seed?"

"I am afraid of the dark," sniffled the poor little seed.

"Oh!" said Slide, "When were you put in the ground?"

"I was put into this scary, dark place two days ago," he responded.

"Well then I have some good news for you!" said Slide joyfully.

"Like what?" the little seed asked with surprise.

Slide said, "You will be back in the sunlight very soon."

"But you must be patient until then!" warned Slide.

"How will I ever get back into the sunlight with all this dirt on top of me?" whimpered the little seed.

Slide said, "You will sprout roots and a stalk which will poke above ground, and then you will grow slowly into a very tall green plant with many seeds. Then you will turn a wonderful gold color when you are mature."

The little seed said, "Thank-you!"

The seed seemed much happier so Slide went on his way. The next time Slide saw him, he was a foot above ground and growing rapidly.

author - C.G. Bibby



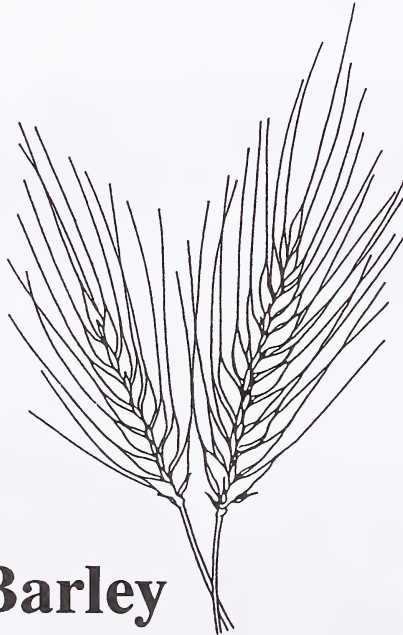
Grains of Alberta



Wheat



Oats



Barley

Grains of Alberta



Corn



Canola



Rye

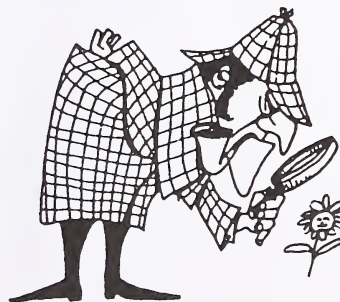
Data Sheet for Field Trip



Second Field Trip

| | |
|---------------------|---------------------|
| Date _____ | |
| Season _____ | |
| Weather _____ | |
| Observations | Observations |
| | |

1. What does grain look like, right up close?
2. How far apart are the plants?
3. How tall are they? Are they up to your knees?
4. How many heads are on the stem?
5. What does the earth look like and feel like?
6. How does it feel to pass my hand over the plants of grain?
7. How does a head of grain feel in my hand?



Agriculture Words



Can you finish the words in each picture?



_____ e e d s



_____ p r o u t



W h e a t

_____ l a n t

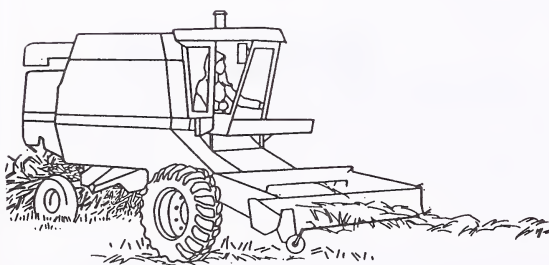
Agriculture Words



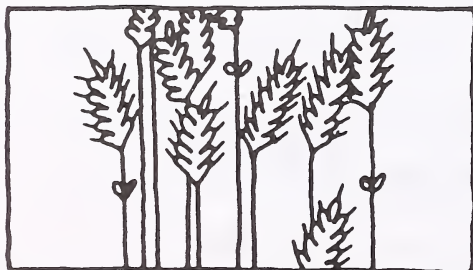
_____ a t s



_____ a i n



_____ a r v e s t



F i e l _____ o f

G r _____ i n

Activity 2



A THRESHING COMPETITION



STUDY QUESTION:

How does a farmer collect seeds from a field of grain? Why does he have to hurry?

THE ACTIVITY:

In this activity the children separate seeds from the heads.

SUBJECT AREA:

Science

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Retain information received verbally: follow instructions.

Read a variety of written materials: experience charts.

SCIENCE

Environment: identify changes in the environment resulting from man's activities.

AGRICULTURE CONCEPTS:

Harvest: time as a factor in harvesting.

PURPOSE

To introduce children to the concept of time and weather being a factor in harvesting.

To give children the opportunity to develop their reading skills and the ability to follow directions.

MATERIALS REQUIRED:

A large supply of grain stalks, at least five per child. (Other plants could be used - e.g. pods of peas or beans, cobs of corn, or packaged sunflower seeds.)

Small cans or boxes for holding threshed seeds.

Diagram of grain stalks. Supplied in this activity.

Pictures of harvesting. Supplied in this activity.

TIME REQUIRED:

1 to 2 class periods.



PROCEDURE



Part One

Introduction

Have a person come to your classroom with the grain that you need. This person should say his combine broke down and he needs help.

Part Two

Preparation

Give each child a stem of grain. Demonstrate how to separate the seeds from the plants and let the children practice on their stems.

Organization

Form teams of 4 - 5 children and give each team an equal number of grain stems - at least 5 or 6. Identify groups as names of combines (John Deere/ Case/International/New Holland/ Belaris). Set a limited time for separating the seeds from the heads.

NOTE:

The time should be short enough to ensure that not all the seeds can be separated.

Part Three

The Race

Time the children, encourage them to collect as many seeds as possible in their seed bins (little boxes or cans). The winners are the team who collect the greatest number of seeds. During which, change weather conditions sunny/ rain/cloudy/thunder. Use snow as the method of stopping the harvest.

Recording and Comparing Yields

When you call time, ask each group to count their yield and to record the number on a large chart such as the one illustrated below.

Results of Threshing Competition

Team 1 collected _____ seeds.

Team 2 collected _____ seeds.

Team 3 collected _____ seeds.

Team 4 collected _____ seeds.

Part Four

Conclusion

Read the chart and briefly discuss the results, emphasizing the importance of time to the farmer who is in a race with the weather. Relate the activity to grain harvesting by referring to the diagrams of grain plants and the photographs of harvesting.

FOR DISCUSSION

How did the change in weather affect your actions or feelings?

Why do you think the farmer is in a hurry?

Was it hard to separate the seeds from the head?

How do you think the weather affects the farmers?

EVALUATION STRATEGIES

Have children draw a head of grain and a seed with the chaff still on. Then have them draw a seed after the chaff is removed.

Have children complete the following sentence:

One day Slide was helping a farmer with the harvesting by separating the seeds from the heads in a race against time.....

RELATED ACTIVITIES

1. Use construction paper or cardboard to make little bins for collecting the seeds.
2. Write a poem about harvesting; highlight words that suggest hurry.
3. Visit a grain elevator.

Chaff is the
outside cover
on the seed.



HARVESTING IN ALBERTA



Swathers are used to cut the grain and lay it in rows with the kernels on top to dry.

HARVESTING IN ALBERTA



Combines collect the swaths and separate the grain from the straw. The straw is left on the field and the grain is collected in a hopper; then transferred to trucks.

HARVESTING IN ALBERTA



Elevators are used to transfer grain to trains and trucks which haul it to market

Activity 3



GERMINATING SEEDS



STUDY QUESTION:

If I plant 10 seeds will all of them grow?

THE ACTIVITY:

In this activity the children sprout grain seeds. Grain seeds or large vegetable seeds are best for this activity.

SUBJECT AREA:

Science

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Communicate orally: observe and describe a sequence of events.

Develop thought processes: comparisons; explanations.

SCIENCE

Plants and Animals: observe and describe stages in the growth of a plant.

AGRICULTURE CONCEPTS:

Germination as a stage in plant growth: moisture as a condition of germination.

PURPOSE

To introduce children to the beginning and very important stage in plant life.

To give children the opportunity to further develop their language skills they learn.

MATERIALS REQUIRED:

Poem about germination. Supplied in this activity.

Approximately 100 seeds from a seed package.

Shallow pans; paper towels or blotting paper.

Fact sheet on germination and minimal clues task sheet. Supplied in this activity.

TIME REQUIRED:

To Start: One Class Period.

While Seeds Grow: 15 minutes per day for a week.

To Finish: One Class Period.



PROCEDURE

Part One

Introduction

Give the children one or two seeds to hold in their hands. Read the germination poem to the children to get them interested and give some information to them before starting the activity.

Part Two

Preparation

Form small groups and give each group 10 seeds to germinate. Have the children thoroughly wet their paper towels and place them in shallow pans then place their seeds on the wet paper towels. Cover them lightly with plastic wrap to prevent evaporation. Put one set of seeds on a dry towel as a "control".

Part Three

Care of Seeds Recording

Have the children keep the paper towels moist, observe their seeds daily, and count the numbers that have sprouted each day. Have each group record their number on the board; add them and record the total number on a chart such as the one illustrated below. When no more seeds are sprouting (4-6 days for grain) discard the seeds. When children are doing this activity they could keep their own records of the changes on their own data sheet. (A sample is supplied for their use.)

Sprouting Seeds On Wet Paper

| | | |
|------------|-----------|---------------------------------------|
| First day | (Monday): | We set our seeds on wet paper towels. |
| Second day | (): | _____ seeds have sprouted. |
| Third day | (): | _____ seeds have sprouted. |
| Fourth day | (): | _____ seeds have sprouted. |
| Fifth day | (): | _____ seeds have sprouted. |

Dry Seeds

| | | |
|-----------|-----------|--|
| First day | (Monday): | We placed one set of seeds on a dry paper towel. |
| Fifth day | (): | _____ of these seeds have sprouted. |

Part Four

Conclusion

Discuss the results in relation to factors that support germination e.g. moisture, temperature, age and size of seed.

FOR DISCUSSION

What conditions are needed for seeds to grow?

Why did the seeds on the dry paper not grow?

Why is moisture so important to the growth?

Is water an important part of the lives of other living things?

EVALUATION STRATEGIES

Use the "Our Seed Story" as a method of evaluation.

RELATED ACTIVITIES

1. Use the minimal clues task sheet as a means of reviewing the activity while developing skills in using context and experience to identify words.
2. Have children draw and label simple diagrams of their sprouting seeds.
3. Invite someone from a seed cleaning plant to show the children how grain is cleaned and graded, or visit such a plant.
4. Visit an elevator.



TEACHER RESOURCE



STARTING OUT

A little seed must have a moist warm lair,
so he will need lots of tender loving care.

If the seed ever gets too cold or too dry,
he will not be able to grow and will die.

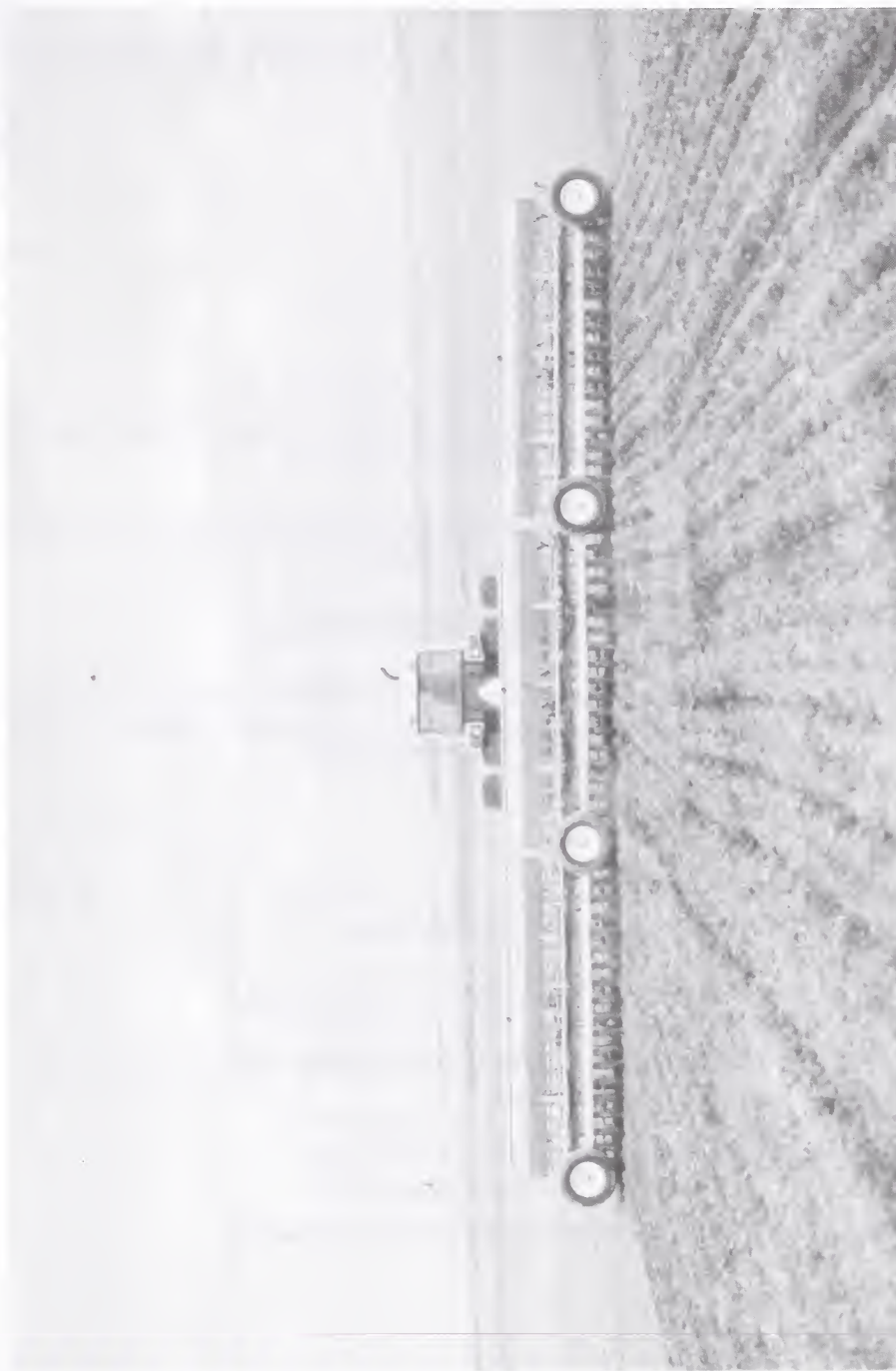
However, if the growing conditions are right,
the seed will sprout out with all its might.

The success of the seeds depends on the weather
because they are as fragile as a feather.

So, all the farmer's pray for rain and heat
to start the seeds off on the right beat.

Though, Mother Nature makes up her own mind,
whether or not she wants to be kind.

author - C.G. Bibby



A farmer uses a seed drill to plant his seeds.

Seeds



Factors Which Influence Germination

- Moisture - Essential to germination.
- Age of seed - Older seed is less viable.
- Size of seed - Big seed has more carbohydrate to sustain germination until the sprout reaches the surface.
- Depth of seed - Covered seed retains moisture; if too deep, the sprout may not reach the surface of the earth.
- Temperature - Warm but not enough to evaporate moisture.
- Diseases - Can suffocate a plant, preventing water from passing from the seed germ up through the growing shoot; stem wilts and falls over, even if it reaches the surface.

Seed Cleaning

- Cleaning and grading occurs at seed cleaning plants.
- The cleaning process removes weed seeds and small kernels.
- Many seed cleaning plants across Alberta are co-operatively owned by farmers, municipalities, and Alberta Agriculture.
- Some plants are privately owned.
- Cleaning and grading is also done by seed growers themselves.

Our Seed Story



Summary:

1. We put 10 _____ on a wet paper towel.
 2. We looked at the seeds every _____.
 3. We kept the paper towels _____.
 4. The seeds began sprouting in _____ days.
-
1. We also put 10 _____ on a dry paper towel.
 2. We looked at them every _____ too.
 3. After 5 days _____ of these _____
had sprouted.

Conclusions:

1. When _____ are planted, only some of them
_____.
2. A farmer uses the best seeds he can get so that many
plants will _____ in his field.
3. The seeds need _____ to start growing. In
dry weather a farmer may have to wait for rain to help
the little seeds come up.

STUDENT RESOURCE



Sprouting Seeds On Wet Paper

First day (Monday): We set our seeds on wet paper towels.

Second day (): _____ seeds have sprouted.

Third day (): _____ seeds have sprouted.

Fourth day (): _____ seeds have sprouted.

Fifth day (): _____ seeds have sprouted.

Dry Seeds

First day (Monday): We placed one set of seeds on a dry paper towel.

Fifth day (): _____ of these seeds have sprouted.

Activity 4



WHO'S BEEN MAKING MY PORRIDGE?



STUDY QUESTION:

Which grains are in our breakfast foods?

THE ACTIVITY:

In this activity children identify grain products they eat every day.

SUBJECT AREA:

Science

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Use appropriate forms of written language: record experiences.

Communicate orally: reports.

SCIENCE

Energy: name and classify sources of energy.

AGRICULTURE CONCEPTS:

Grain as a source of food: food as a source of energy.

PURPOSE

To introduce children to the concept of grain being a part of many foods we eat everyday.

To give children the opportunity to further develop their language skills (oral reports/ different forms of written language).

MATERIALS REQUIRED:

Data sheets for children. Supplied in this activity.

Empty packages or labels from grain products, e.g. cereals, flour, bread.

TIME REQUIRED:

To Start: 1 class period.

During Recording Period: 15 minutes per day for 3 days.

To Finish: 1 class period.



PROCEDURE

Part One

Introduction

Bring in some different products. Milk, cereal, bread, beer, oil, etc. (empty packages of these products). Ask children which products are made of grain. Ask them to list other things made with grain. Ask the children what they eat for breakfast?

Part Two

Recording

Ask the children to record on the data sheets what they eat for breakfast each day for a few days. Ask each of them to bring an empty box or a wrapper or label from a food item that contains grain products.

Part Three

Reading/Reporting

Classifying

Have the children read labels on the boxes and wrappers to identify grains used in each Classifying product. Compile the information on the board showing groups of related foods - e.g. processed cereals, raw cereals, breads, non-grain items such as milk or jam. Reclassify the items according to the grains used in them. Have children write a short ad for the product using the compiled information following your example.

Part Four

Conclusion

Review the study question, emphasizing the importance of grain in our daily eating.

FOR DISCUSSION

Why is grain so important in our diet?

Is grain only eaten at breakfast?

Do other living things besides people eat grain?

EVALUATION STRATEGIES Use the data sheet as a method of evaluation.

Note the ideas and information in the advertisements and have children draw a picture to go along with their ads.

Have children write a story about a day in the life of a stalk of grain.

RELATED ACTIVITIES

1. Have the children work in groups to prepare a collage of grain-based breakfast foods using drawings, paintings or pictures from magazines. Encourage the children to add labels to their display.
2. Write breakfast menus.
3. Cook hot cereals and have them for snacks in the classroom.
4. Invite parents and make breakfast.



STUDENT RESOURCE

My Breakfast

Keep a record of what you eat for breakfast for three days.

A large empty circle intended for a student to draw or write inside.

Day: _____

A large empty circle intended for a student to draw or write inside.

Day: _____

A large empty circle intended for a student to draw or write inside.

Day: _____

Name: _____

Activity 5



STOCKING THE CUPBOARD - AND THE FRIDGE



STUDY QUESTION:

How many garden products can you find at home?

THE ACTIVITY:

In this activity children identify common garden products used in their homes.

SUBJECT AREA:

Science

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Recognize words instantly: use phonic analysis.

Develop thought processes: classification.

SCIENCE

Plants and animals: describe and classify plants.

AGRICULTURE CONCEPTS:

Vegetables as food: food processing.

PURPOSE

To introduce children to the process of classification (noticing differences and similarities of vegetables).

To give children the opportunity to further develop language skills as they learn about vegetables.

MATERIALS REQUIRED:

Small cards, approximately 3 X 5 inches.

Garden products, fresh and processed.

TIME REQUIRED:

2 to 3 class periods.



PROCEDURE

Part One

Introduction

Ask children to name their favorite vegetable and draw a picture. Have children guess Slide's favorite vegetable. Identify the turnip as his favorite. Then have children identify the vegetables that have not been mentioned already.

Part Two

Preparation

Identify categories of garden products such as vegetables growing above the ground, vegetables or fruits cooked into a sauce and canned. Assign groups of children to bring samples of each type of product for showing in class.

Part Three

Describing Classifying

As each child shows his or her product, write its name on a card or have the child label the card. Put the products on the table and the labels into a hat or a box. Then let each child retrieve one label, read it and find the item that goes with it. Have child rate the product (Good -- Excellent) according to nutritional value.

Reading Game

Part Four

Conclusion

Sort the products or labels in various ways - e.g. fresh-processed; big-small, fruits, vegetables; uses. Return briefly to the study question to note the many garden products in our homes.

FOR DISCUSSION

What kinds of things do vegetables give us when we eat them?

What can be made out of vegetables?

Do you think canned vegetables are as good as fresh ones?

EVALUATION STRATEGIES

Have children write up the uses of their favorite vegetable and note the ideas and draw picture to go along with the information.

Have children write up a short ad that promotes their favorite vegetable.

RELATED ACTIVITIES

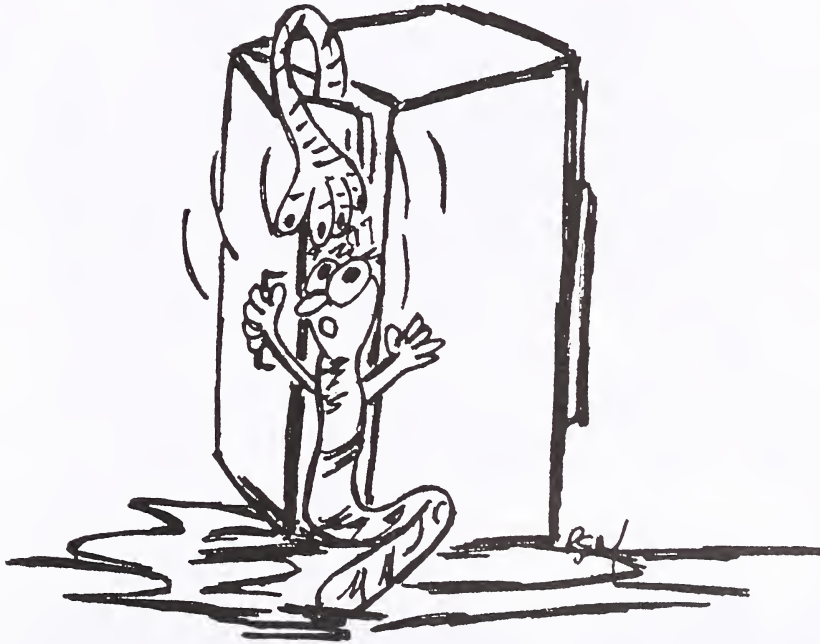
1. Make a supermarket display or create a farmer's market.
2. Prepare an experience chart about the uses of garden products, as illustrated below:

Apples are used for pie filling.

Apples are used for _____.

Apples are used for _____.

3. Make salads during one class.





UNIT 2 - FARM FAMILIES

INTRODUCTION

While we acknowledge that the details of family living vary considerably among farm families, our goal in this unit is to help children recognize and appreciate some of the common features of farms and of life on farms today. Underlying the unit is the question that asks what it might be like for a child to live on a farm. For a child who does not live on a farm a contrast may be implied, while for a farm child the goal is heightened awareness of the variety of patterns found from farm to farm. The frame of reference for this unit is reflected in the following global themes:

1. Farm life offers unique opportunities to be close to nature.
2. A farm home is usually surrounded by a considerable amount of space and this influences the kinds of pets children have and the way the children play.
3. In rural settings, farm children often are more isolated than city children (often a few kilometres to the nearest neighbouring farm) and thus are more dependent on themselves and others in their families for companionship and help.
4. Because a farmer usually lives where he works, farm children are in daily contact with their parents' work; play and work can merge as children enjoy participating in adults' activities.

OBJECTIVES

1. To recognize that farming has become highly specialized - that a moderately small mixed farm is not as common as it used to be in Alberta.
2. To identify some characteristics of a farm setting.
3. To develop concepts and knowledge related to farm life.



Activity 6



FAMILY SCENES



STUDY QUESTION:

What neat things could you do if you lived on a farm?

THE ACTIVITY:

In this activity the children dramatize aspects of family life on farms.

SUBJECT AREA:

Social Studies

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Use gestures to convey meaning.

SOCIAL STUDIES

Read a variety of materials: pictures.

Families: me in my family; Canadian families.

AGRICULTURE CONCEPTS:

Child as a part of a team in farming.

PURPOSE

To introduce the children to the differences between rural families and urban families and the role that children play in the two families.

To give children the opportunity to express themselves creatively while learning about families.

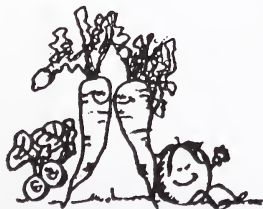
MATERIALS REQUIRED:

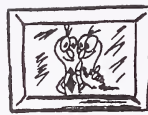
Information sheets of scenes depicting life on a farm. Supplied in this activity.

Cartoons on family life. Supplied in this activity.

TIME REQUIRED:

2 to 3 class periods.





PROCEDURE

Part One

Introduction

Examine the scenes of family life on a farm. Have the children describe the scenes. Highlight the activities of the farm children in the scenes.

Part Two

Dramatization

Form groups of 3 or 4 children and give one picture to each group. Have the children in each group select a specific part of their picture to dramatize. Encourage them to use sounds to help convey their messages.

Part Three

Conclusion

Perform the pantomimes. Allow the children in the audience to ask one or two questions or make one or two comments to identify what the actors are depicting about farm life.

FOR DISCUSSION

What are some of the differences between rural and urban families?

How do the roles of the people change?

What are some activities that can only be done on the farm?

What are some similarities between these two types of families?

What role does the child play on the farm?

EVALUATION STRATEGIES

Have children write out their dramatization on paper so it can be used as a reference for the children and for the teacher.

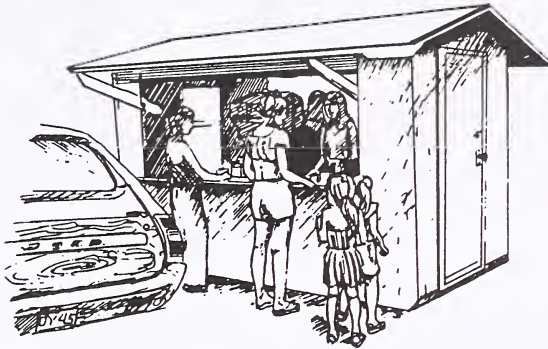
Have children describe an activity they like to do and then have them examine whether or not a child living in the country would be able to do the same activity and if he would go about it in a different way.

RELATED ACTIVITIES

1. Read a story to the children about a farm child or a farm family.
2. Invite a member of a farm family into the class. Prepare questions for interviewing the person about a child's life on the farm. Write individual thank you notes.

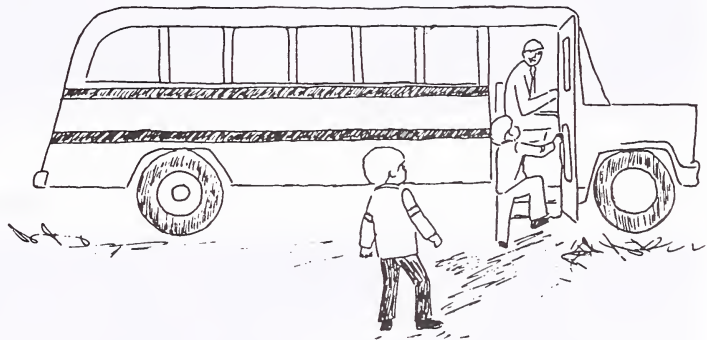
STUDENT RESOURCE

Family Life on a Farm



Rick's older sister sells vegetables at the roadside market on Saturdays.

Peter and Dave take a school bus to school.

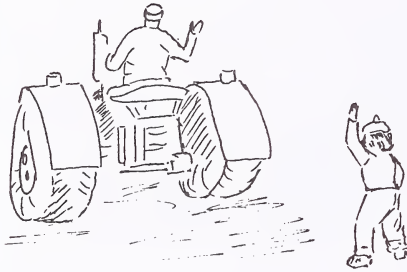


Randy and his dog Pal bring in the cattle.

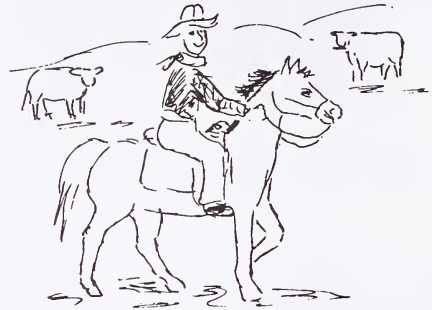


Reta helps by feeding Nanny and her new kid.

Family Life on a Farm



Anne calls "good-bye" to Uncle Norman as he leaves the yard.



Kevin likes to ride herd with his pony Chief.



Betty is very helpful in Mom's garden.



Cindy loves the old ewe's new family.

A FARM CAN BE A FINE PLACE TO LIVE.



Activity 7



OLD MACDONALD - NEW MACDONALD

STUDY QUESTION:

If I visit a modern farm, what will I find there?

THE ACTIVITY:

In this activity the children will compose a revised version of the popular song Old MacDonald Had A Farm.

NOTE

Although the song mentions farm animals, not humans, the message of the song is that most farms are relatively self-contained.

SUBJECT AREA:

Social Studies

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Listen to songs: identify details pictures; songs.

Use verse and gesture to convey meaning.

Use phonic and contextual analysis to identify words.

SOCIAL STUDIES

Canadian families.

AGRICULTURE CONCEPTS:

Specialization: change; farm.

PURPOSE

To introduce children to the modern farm and how much farming has changed.

To give children the opportunity to further develop their language skills while learning.

MATERIALS REQUIRED:

Copies of music.

Pictures of modern farms. Supplied in this activity.

TIME REQUIRED:

2 class periods.



PROCEDURE

Part One

Introduction

Have someone come into the classroom singing “Old MacDonald Had a Farm”. Have children listen to the song and sing along with this person. Then, have children listen to this song off a record while looking at words.

Part Two

Discussion

Look at the pictures and illustrations of modern farms and identify some of their features, writing them on the board as you go.

Part Three

Composing

Listen to the song again and note differences between Old MacDonald’s farm and modern farms. Use an experience chart to compose a song with new words reflecting the characteristics of a modern farm.

NOTE:

The revision may have fewer lines than the original song, since farming has become quite specialized. This could be accommodated by creating several verses on different kinds of farming.

Part Four

Conclusion

Practise the new song; if possible sing it at a school assembly or for another class. Add gestures and costumes if desired.

FOR DISCUSSION

What is specialization?

What does Old MacDonald have on his farm that is different from New MacDonald?

How has the farmer’s role changed?

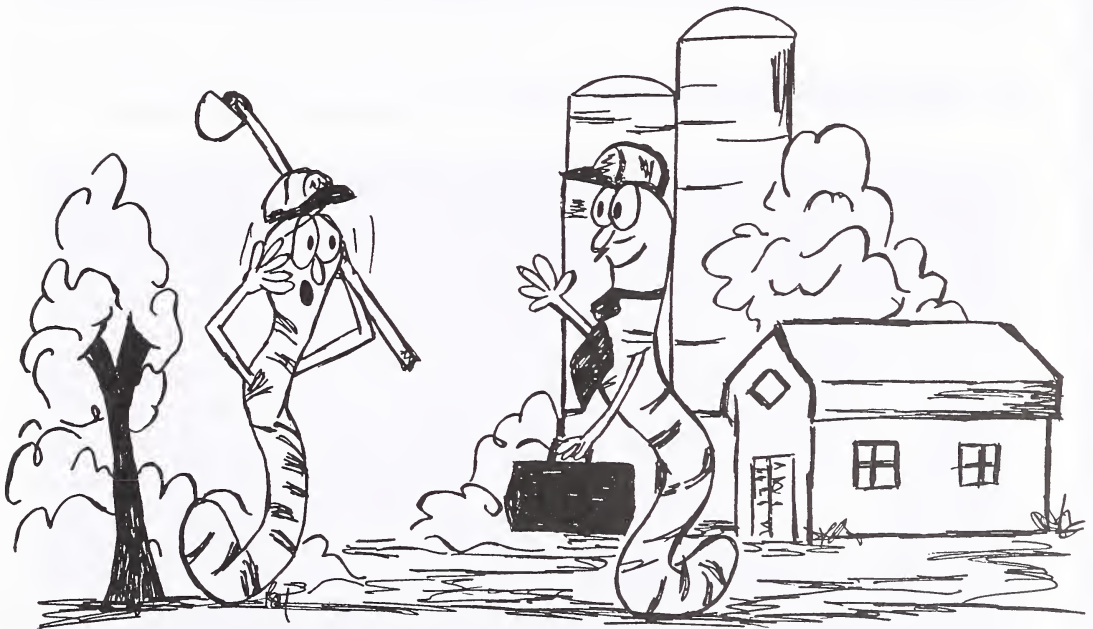
EVALUATION STRATEGIES Have children dramatize one of the verses for the class.

Have the children pick one of the verses and make up a short story around that verse.

Have children draw a picture that shows how farming has changed.

RELATED ACTIVITIES

1. Build a farm in a sandbox. Make a sign to indicate what kind of farm it is.
2. Write a poem about the modern farm indicating what it will contain.
3. Visit a farm in your area.



Alberta Farm Life Today



Many farm families plant lawns and flowers.



Farm families participate in sports and other recreational activities; sometimes they travel quite far to do so.



A combine could cost up to \$160,000.00 - 15 times the cost of a small car.



Most farmers specialize in one kind of farming.



When a farmer specializes in one kind of farming he may have a larger number of animals or more land in crop. He depends on the presence of urban markets, processing and transportation which links producer and consumer.



A veterinarian helps a farmer maintain the health of his farm animals.

Activity 8



SOUNDS OF FARMING



STUDY QUESTION:

If I stay very still when I am in a field or barn what will I hear?

THE ACTIVITY:

In this activity children identify some of the sounds characteristic of a rural farm setting.

SUBJECT AREA:

Science

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Demonstrate listening awareness: attending.

Demonstrate growth in thought processes: expression of feelings; imagining.

SCIENCE

Environment: develop an awareness of and sensitivity to the environment.

AGRICULTURE CONCEPTS:

Sounds and smells as aspects of farm objects and settings.

PURPOSE

To introduce children to the sounds and smells that are characteristic of the farm.

To give children the opportunity to further develop their senses (hearing/smell).

To give children the opportunity to develop their language skills (expression).

MATERIALS REQUIRED:

Selected poems.

Instruments for making various sounds.

Information sheets. Supplied in this activity.

TIME REQUIRED:

1 to 2 classes.



PROCEDURE

Part One

Introduction

Bring a tape recording of many sounds that you hear around your house (phone/bell/plane/door/ alarm/cat). Have children identify these sounds and name some sounds regularly heard in their home.

Part Two

Focusing Attention

Have the children put their heads down on their desks or tables. Ask them to get very still and to listen to their own breathing.

After a short while, ask them to listen to the air conditioning, footsteps in the hall, the click of the clock. Ask them to pay attention to other sounds they hear.

Discussion

In about a minute ask the children to slowly open their eyes and lift their heads. Discuss how they felt and what they heard.

Relating

Relate this activity to sounds the children might hear in various farm settings. Examine pictures of farms noting items that might make certain kinds of sounds.

Part Three

Imagining

Then repeat the focusing procedure - heads down, eyes shut. Ask the children to imagine being in specific farm settings. While their eyes are closed speak to them slowly about each setting you want them to imagine. Mention 2 or 3 items that might be associated with sounds. Examples are given on the information sheet on sounds of farming. Incorporate smells as well as sounds if you wish.

Part Four

Conclusion

After a few examples, have the children open their eyes and share their impressions as before. Help them identify some of the sounds that particularly suggest a farm setting or activity. List some of these sound words on the board.

FOR DISCUSSION

What are farming sounds?

Are there sounds that are not usually heard in the city?

How do these sounds make you feel?

Do you think the farm is as noisy as the city?

EVALUATION STRATEGIES

Have children write up a poem about the different sounds on a farm.

Have children record on an audio tape their impression of farm sounds.

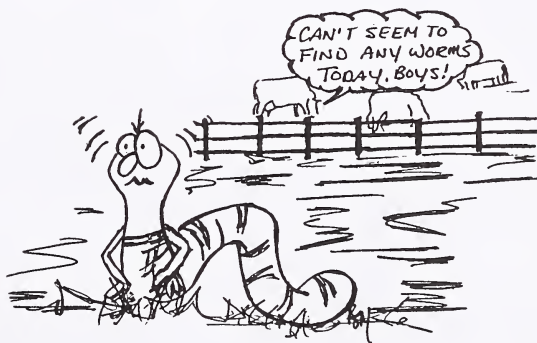
RELATED ACTIVITIES

1. Read your list of sound words and those listed below. Have the children use simple instruments to make the sounds:

- old baler banging
- tractor roaring
- grain auger clanking, rattling
- sheep shears buzzing
- cattle bawling
- chicks peeping
- grain grinder crunching
- water pump thumping

2. Make a trip to a field or forest. Take along note pads and tape recorder for recording sounds. After the walk have the children share their impressions of the sounds they heard.

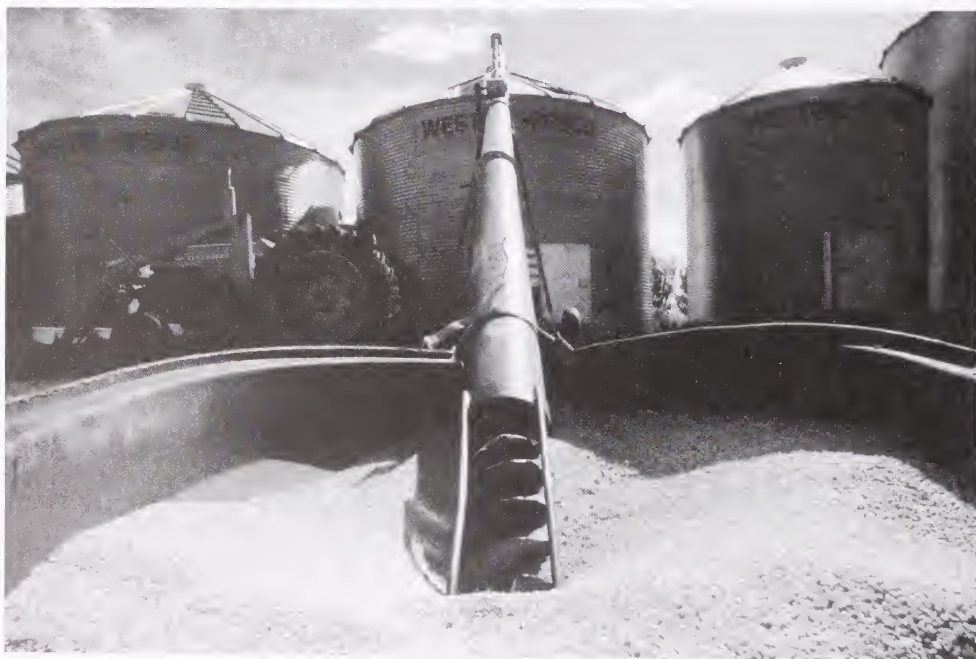
3. Make a Find a Word Puzzle with the sounds in it for the children.



Sounds of Farming - for imagining

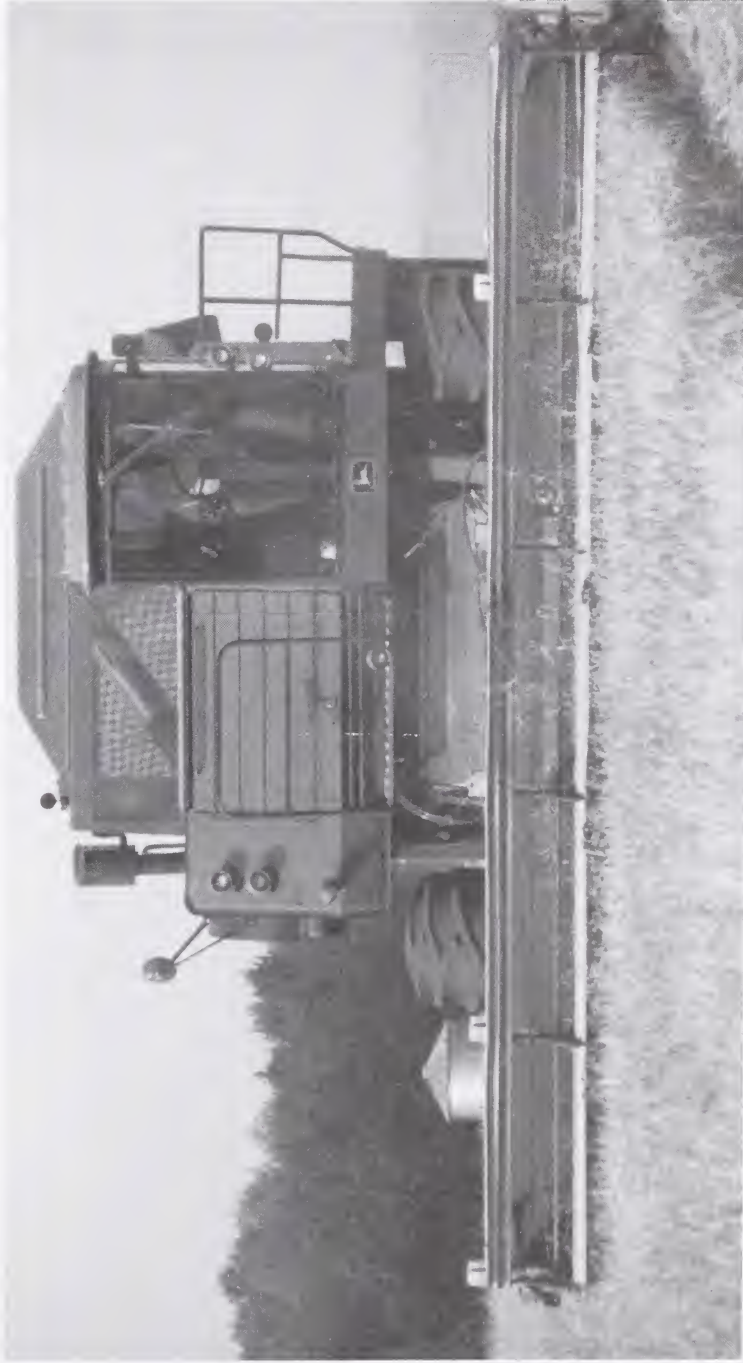


Baby Chicks “peep”



Grain Augers “clank”

Sounds of Farming - for imaging



You are watching a combine working in a field. You are 'way up high and you can see the header picking up swaths of grain. You can hear the big cylinder rolling it up. Streams of little seeds fall into the hopper behind the driver. They're picked up by the auger which clanks a bit as it pours the seeds into the big truck. The engine of the truck keeps running as the truck follows the combine down the field.

Sounds of Farming - for imagining



You are in the barn with several cows. They are eating hay and waiting to be milked. When you get up close to a cow to pat her, you can hear her grinding her teeth as she chews. You can hear the cows' hooves on the wooden floor and the swishing of hay in the stall when a cow pulls another mouthful. One of the cows calls out for attention - a low, rising Mo-o-oo.

Sounds of Farming - for imagining



You are at a farmer's market with your mom, shopping for fresh vegetables. The market is in a long, low building and is very crowded. Many people talk at once, and cash registers clang and echo through the market. Someone laughs, a little child screams in the next aisle. Near you someone says, "Look at these beautiful pumpkins!" and someone else says, "Thank you; thank you very much."

Activity 9

FARM CAT, CITY CAT - A VERY SPECIAL CAT



STUDY QUESTION:

What's the difference between owning a barn cat and a house cat?

THE ACTIVITY:

In this activity children make puppets and use them to tell each other about their impressions of farm and city life.

SUBJECT AREA:

Science

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Read a variety of materials: charts.

Use creative dramatization and dialogue.

SCIENCE

Plants and Animals: describe and classify animals.

AGRICULTURE CONCEPTS:

Animals as pets: animals as workers.

PURPOSE

To introduce children to the differences and similarities between an animal that is a pet and one that is a worker.

To give children the opportunity to use dramatization as a means of expressing their ideas and feelings.

To give children the opportunity to further improve their language skills (reading).

MATERIALS REQUIRED:

Paper bags, socks or hankies for making puppets.

Picture with personality profiles of a barn cat and a house cat. Supplied in this activity.

TIME REQUIRED:

2 class periods.



PROCEDURE

Part One

Introduction

Bring two puppets into class that represent a farm cat and a city cat. Through the puppets, explain to the children what each cat most enjoys about his life.

Part Two

Preparation

Examine the personality sketches of a barn cat and a house cat. Highlight the differences.

Making Puppets

Organize the children into pairs. One of each pair will make a country cat puppet and one a city cat. Encourage them to make their cats noticeably different.

Part Three

Puppet Show

Have each pair of children prepare and practise a short scene about a meeting between their two cats.

Part Four

Conclusion

Have a puppet show, noting the ways that children show the differences between farm and city cats.

FOR DISCUSSION

What are the similarities between these two cats and their lives?

What are the differences between the two?

Is the attention received from the people by the City Cat different from that of the Farm Cat?

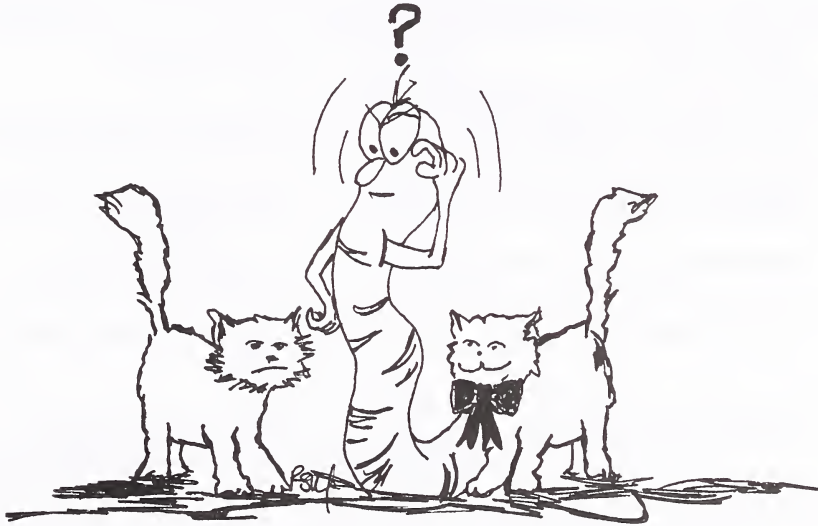
What adaptations would these cats need to make in order to live in the other environment?

EVALUATION STRATEGIES Use the scene that the children do as a method of evaluation.

Have the children write a short story from the cat's point of view about a normal day for the cat (what he does - how he feels). Have them pick one of the two types of cats for the story.

RELATED ACTIVITIES

1. Write short poems about the theme or about a different farm animal or pet. Share the poems and have the children illustrate them for a class anthology.
2. Make puppets of other farm animals and play out their lives with the farm children who are their masters.
3. Read the story *The Country Mouse and The City Mouse* in which the country mouse goes to visit the city mouse.



FARM CAT AND CITY CAT: PERSONALITY PROFILES



Mouser

- sharp toenails
- lives mainly outdoors
- main job is to hunt mice
- large territory - freedom to roam
- eats the mice that he finds
- a worker and a pet



Companion

- clipped toenails
- lives inside for the most part
- main job is to be a companion
- small territory - house
- eats special cat food left by his owner
- a pet and a showpiece

Each cat has duties in the family.

Each one is special to its people.

Activity 10



ALPHABET SEARCH: FARM LIFE

STUDY QUESTION:

How many words do you know that tell about farm life?

THE ACTIVITY:

This is a word association and word sorting activity in which children identify families of words and sort the words alphabetically.

SUBJECT AREA:

Language Arts

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Read a variety of materials: pictures.

Develop vocabulary.

Use phonic and structural analysis to identify words.

AGRICULTURE CONCEPTS:

Farm: farming.

PURPOSE

To introduce children to the vocabulary which is associated with the farm.

To give the children the opportunity to associate the word with the picture of the object.

To give the children the opportunity to further their language skills (spelling, etc.).

MATERIALS REQUIRED:

Story - "The Dream". Supplied in this activity.

Picture related to farming and farm life. Supplied in this activity.

Word searches for the students. Supplied in this activity.

TIME REQUIRED:

1 class period.



PROCEDURE

Part One

Introduction

Have children close their eyes and imagine they are on a farm, then have them open their eyes and give the names of the objects that they saw on their imaginary farm.

Part Two

Brainstorming

Use pictures to further stimulate the children's recall of words associated with farming and farm life. Suggest various categories and list the children's words in clusters as they dictate them - e.g. plants, animals, jobs, machines, people, sounds.

Part Three

Identifying Initial Letters

Write the letters of the alphabet one by one on a big chart. Have the children find words in your list for each letter; have them dictate or write the words on the chart. It may be convenient to spread the activity over a few weeks, focusing on only one or a few letters at once.

Part Four

Conclusion

Read all of the words together.

FOR DISCUSSION

What do all the words in the plant category have in common?

Change the title of the category and ask this question for each word group (Plant/Animal/People/Machines/Sounds/etc.).

EVALUATION STRATEGIES

Have children pick one word and have them describe the object that that word represents.

Have children complete the two word searches supplied with the resource sheets.

Have children do a picture book with the agriculture words they have learned by drawing pictures of the objects represented by each word and then writing the word underneath.

RELATED ACTIVITIES

1. Have the children illustrate one word for each letter, for a wall chart or an agricultural alphabet book. Alternately make a word tree with each branch holding words of one category.
2. Use some of the remaining words for word sorts according to other phonic or structural features - e.g. rhyming words or words with specific medial or final consonants.
3. Have the children do a play or a scene around one or more of the words.
4. Have children play charades with each child acting out a different word.



TEACHER RESOURCE



THE DREAM

One day Slide decided to come out of the ground to take a look at the world around him. He spotted a nearby farm and went to investigate. This farm was very different than most farms Slide had ever seen before. For example, he saw:

- a cow spoon-feeding her baby calf,
- a horse driving a tractor through the yard,
- a pig cultivating the soil with his snout,
- a dog calculating profit, cost, and loss,
- a herd of goats knitting wool sweaters,
- a bull smelling a freshly picked bouquet of flowers,
- a chicken planting seeds in the garden,
- a cat swimming in the water trough,
- a donkey storing hay in the barn for winter,
- a goose stomping out a fire in the pasture.

Slide shook his head in amazement and then realized that he had been dreaming all these bizarre things. When Slide thought about his dream he laughed and thought to himself - None of these things could happen on a real farm.

author - C.G. Bibby

FARM LIFE SCENES



FARM ANIMALS



DOGBYCX TG DWQEUMRFVGL
UFHRNJZAOKSPOII OEV BQ
CZGCWHERAKETDUMOB JXY
KAANSJCATPCGEFRSOIVQ
LAZBOMTLOJHIGDUTHYOW
INC PKREOICURMTSEAE GX
NLDNTFC SUUOHEEYRGIEW
GEESEPROAVBVYMKCQZP
SOSOQUBWEGCVXAFWLDN
PRCWYQM JGMKHBZTTI ZKF

COW
DUCKLINGS
SOW
CAT
ROOSTER

DOG
GEESE
GOAT
EGG
SHEEP

STUDENT RESOURCE

FARM ANIMALS



S U E B D L T O N V I W A N I M A L A X
H I E H J T G H C I C K E R F Y Z Y M Q
S B E E U L D T O E S B A W D V N O E X
R P H N M I Z F R Y I K H O N E Y J P G
D H B S A O T W R E P V N L G E X C A O
M O Q I H Z P T A S R I I F Y T C K S J
T R V L B B U L L A N W G O S G E X T C
Q S K J H A Z T I O P M S L R H C Y U F
B E U L T R U S A N V W I O E S X E R N
C O S J D N J C D O P K M R Z T I H E Q

HORSE
ANIMAL
HONEY
BULL
PIGLET

HEN
BEE
CORRAL
BARN
PASTURE

FARMER TALK



U T R A C T O R B O Q Y C S O I L X I W
T R D W Q E M F V G L W H R N J Z A K E
S U P O W I I E V B Q H Z G C W H E R A
K C T O U E M B J X Y E A A N S J P C T
E K F R O I E V Q A Z A U G E R B O M H
T L O J H I D D U Y T T O W N C P K R E
Y I E L D E O I S C U R M T S Z B G X R
L O N T F S U U O H Y E G I W E C P R A
V V E G E T A B L E B Y M J K O A T S O
S Q U B E G V X A W L G D N P R C Y S Q

TRACTOR
WEEDS
WHEAT
SOIL
OATS

TRUCK
YIELD
AUGER
WEATHER
VEGETABLE

STUDENT RESOURCE

FARMER TALK



M J G M K H S G T I A Z K F A R M E R F
U H E A D Q B R P C L T O N V I W A X H
I A E P J T U A H I C K C O M B I N E E
R R F Y Z M P I S U L D T E S B A W D V
N V O E X R C N H Q M S P R A Y I N G T
G E D B S C A O T W E V N L L G E X C S
K S J T S W A T H I N G V L A B A W N H
O T S G E X C D H Z I O P M S N R H C Z
Y E B U E L T S A N V W I O S X T E N P
C O S J D D G P K B A R L E Y M R Z S T

FARMER
HARVEST
SWATHING
SPRAYING
GRAIN

HEAD
SEED
COMBINE
PLANT
BARLEY

UNIT 3 - FARM ANIMALS

INTRODUCTION

This unit is intended as an introduction to farm animals. The activities offer opportunities for the children to meet some of the animals involved in farming. The children will see how some animals become part of a farm family, whether the animals are pets or not. The activities in this unit also introduce some of the ways in which mechanization has influenced the care of animals and increased the number of animals that one farmer can take care of.

This unit is closely related thematically to unit two which introduced some of the changes that have occurred in farming; here we focus on changes in a particular aspect of farming - animals and their care. The underlying questions for the unit are these:

1. What kinds of farms have animals on them?
2. How are the animals cared for?

OBJECTIVES

1. To identify some of the animals raised for commercial purposes on Alberta farms.
2. To identify some of the special equipment used in caring for farm animals.
3. To identify some of the procedures used to maintain the health of farm animals.
4. To appreciate the importance of providing good care for animals.



Activity 11



HATCHING CHICKS



STUDY QUESTION:

Who hatches little chicks these days?

THE ACTIVITY:

In this activity children will create a description for a picture sequence that depicts a chick hatching.

SUBJECT AREA:

Science

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Read a variety of materials: pictures.

Use various forms of written language: stories.

SCIENCE

Environment: identify and describe changes in the environment resulting from man's activities.

Time and Order: describe changes that occur in a regular pattern.

AGRICULTURE CONCEPTS:

Mechanization: hatching.

PURPOSE

To introduce children to the different ways of hatching chicks (mechanized vs. natural).

To give children the opportunity to further their language skills while learning about hatching chicks.

MATERIALS REQUIRED:

A good supply of eggs (hard boiled!).

Information sheet and pictures about poultry farming. Supplied in this activity.

Picture series showing a chick hatching in a natural and in a mechanized setting. Supplied in this activity.

TIME REQUIRED:

1 to 2 class periods.



PROCEDURE

Part One

Introduction

Give each child an egg to look at and take care of during the activity. Explain the conditions necessary for hatching a baby chick (heat/encouragement/time/etc.).

NOTE:

Use hard boiled eggs and supply each child with a small container to set the egg in while they work.

Part Two

Preparation

Examine the pictures of chicks in a hatchery to help the children compare mechanized and natural hatching - especially to help them understand that temperature control is the function an incubator takes over from a brood hen.

Part Three

Drafting

Give each child a copy of one of the picture series. Let children work alone or in pairs to write simple explanations or narratives for their pictures.

Part Four

Conclusion

Share the stories and discuss them, emphasizing the contrast between mechanized hatching so common today and natural hatching.

FOR DISCUSSION

What is mechanized hatching?

What is natural hatching?

What are the differences between the two methods?

How long does the chick take to come out of the egg?

EVALUATION STRATEGIES

Have children draw a picture of a chick hatching, showing the different stages (whole egg/cracks egg/out of egg).

Have children write a short story on the subject and note the ideas and information presented.

RELATED ACTIVITIES

1. Visit a hatchery or a chicken farm if one is accessible (e.g. Lillydale Farms).
2. Read stories such as The Little Red Hen.
3. Have the children write their own little stories about a baby chick; share the stories.
4. If possible, hatch out an egg (longterm project which takes 10 minutes a day).



Hatching Chicks



Alberta had 12 hatcheries in 1988. Their total capacity was approximately 6 million eggs every 3 weeks. These eggs produce chicks for both egg laying and meat.



A chicken lays about 240 eggs a year - about 5 per week or nearly 1 every day.

Approximately 42 million chicks were hatched in 1988. Two million one hundred and fifty-nine thousand were used for egg laying and thirty-four million thirty-six thousand for broiler production. Some were not good enough to sell, and some were exported to hatcheries in other provinces.

Hatching Chicks



Different eggs are used for hatching egg layers and broilers. Even chickens specialize; some are good at egg laying and some are big and good for meat. Turkeys are produced in a similar way.



Some farmers raise chickens for themselves, but many farmers buy eggs and chicken for eating.

Based on Alberta Agriculture, Agriculture Statistics Yearbook - 1988.

Hatching Chicks

Natural



1.



2.



3.



4.



Hatching Chicks

Mechanized



1.



2.



3.



4.



Activity 12

ANIMAL BABIES



STUDY QUESTION:

How many lambs or calves or piglets are born at once?

THE ACTIVITY:

In this activity children identify and count numbers of animals on picture cards.

SUBJECT AREA:

Language Arts

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Read and listen to a variety of materials: pictures; poems.

Use contextual clues to identify words.

AGRICULTURE CONCEPTS:

Farm animal: animal babies.

PURPOSE

To introduce children to the concept of animal babies and how many are born at once.

To give children the opportunity to further their language skills (expressing ideas and opinions/reading words/listening to others).

MATERIALS REQUIRED:

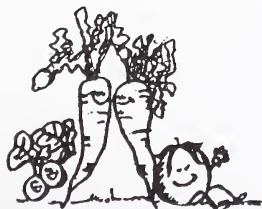
Copy of the poem about animal babies. Supplied in this activity.

Animal picture cards. Supplied in this activity.

Sheet of animal riddles and rhymes. Supplied in this activity.

TIME REQUIRED:

2 class periods.



PROCEDURE

Part One

Introduction

Share the poem with the class and then discuss the numbers of baby animals that are born at once.

Part Two

Viewing

Review the animal picture cards, noting the varying numbers of babies born to different farm animals and comparing those to children's pets and to human beings.

Part Three

Reading

Use the cards at an activity centre where children can practice reading numbers and counting.

Part Four

Conclusion

Use the cards as the basis for reviewing number words and animal words through the use of sentence stems:

This cards shows two (lambs) .

This card shows (ten) piglets.

FOR DISCUSSION

Why do you think some animals have only one baby?

Why do you think a duck has so many babies at once?

Do you think that it is harder to care for one baby or six babies?

EVALUATION STRATEGIES

Have children draw, name and define their favorite animal baby.

Have the children write their own poems about their favorite baby animal.

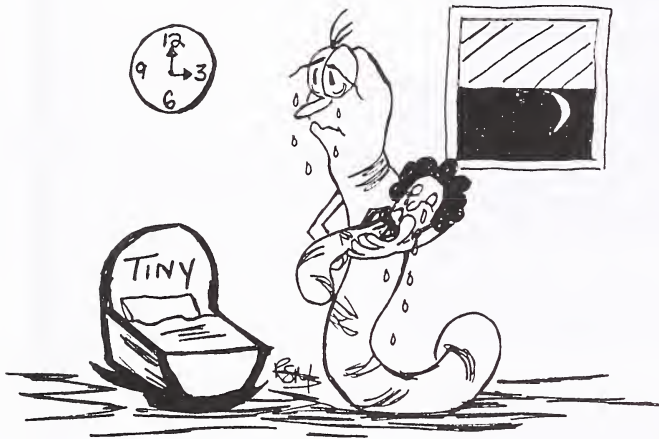
Use riddles and rhymes as a method of evaluation.

RELATED ACTIVITIES

1. Use the sheet of animal riddles as a basis for writing additional verses, and for shared reading.
2. If possible, obtain a copy of the following short film about animals on a mixed farm:

Farmyard Babies (Revised)
Coronet Films
Distribution Centre:
1275 Hubrey Road
P.O. Box 5555
London, Ontario
N6A 4L6

3. Visit a farm or a zoo.



ANSWERS TO RIDDLES AND RHYMES

1. woolly
2. kid
3. pig
4. sheep
5. calves
6. lamb
7. house
8. laugh
9. hat
10. behave

TEACHER RESOURCE

**HI AGAIN!
SLIDE HERE!**



I have a little secret
for all the children

I visited one of my friends the other day,
and ended up surprised in every way.

My friend, Holly the Horse, was having a baby,
so when I came she was a little crabby.

I visited with some of my other friends,
while waiting to see how the story ends.

As I wandered around the farm investigating,
I could see many little baby animals playing.

I saw Lady's six little puppies chasing their tails,
and running so fast that their ears were like sails.

I saw the Red Hen with her dozen fluffy chicks,
who were playing hide and seek in the sticks.

I saw Bossy the cow running after her calf,
wishing she could cut the pasture in half.

I saw Lily the sheep disciplining her twin lambs,
but I am sure they were thinking up more little scams.

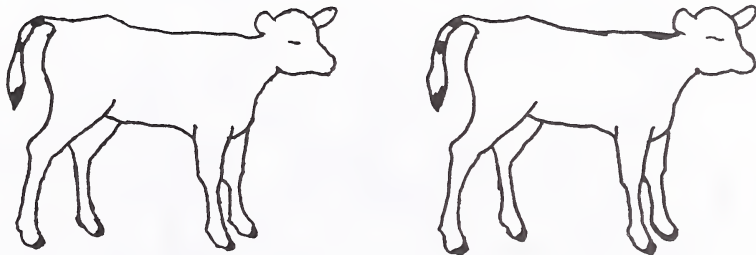
I saw Madame's four little kittens with some string,
as they rolled and tumbled trying to catch the thing.

The moment we all waited for arrived at long last,
Holly's cute little foal named Whiskey wobbled past.

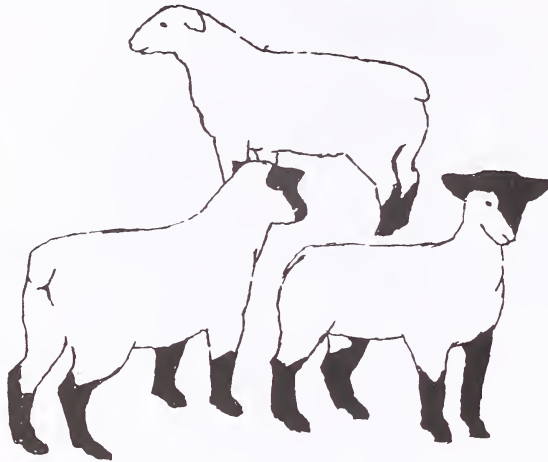
author - C.G. Bibby



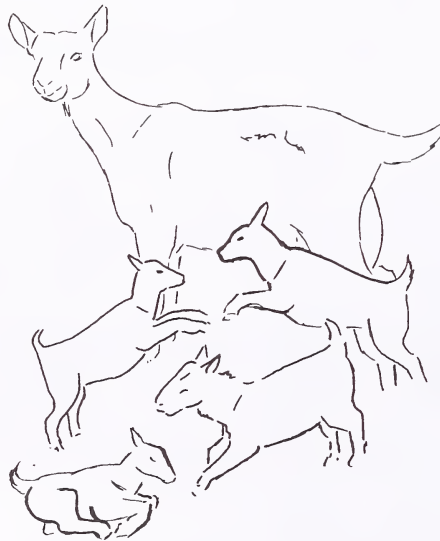
One Colt



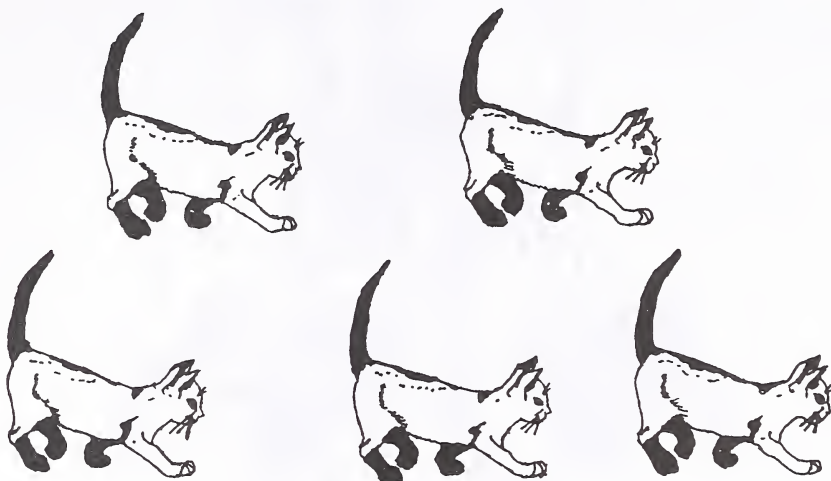
Two Calves



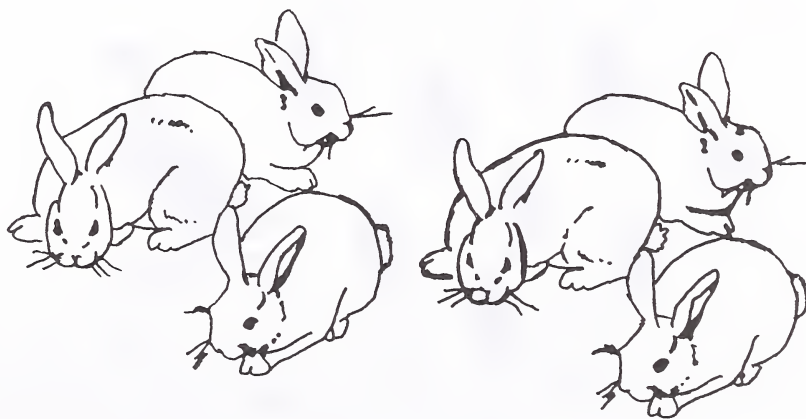
Three Lambs



Four Kids



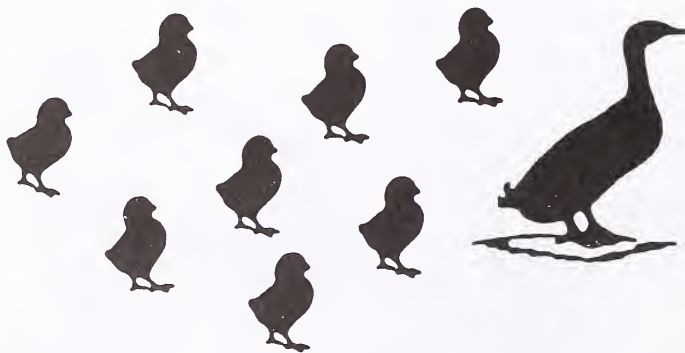
Five Kittens



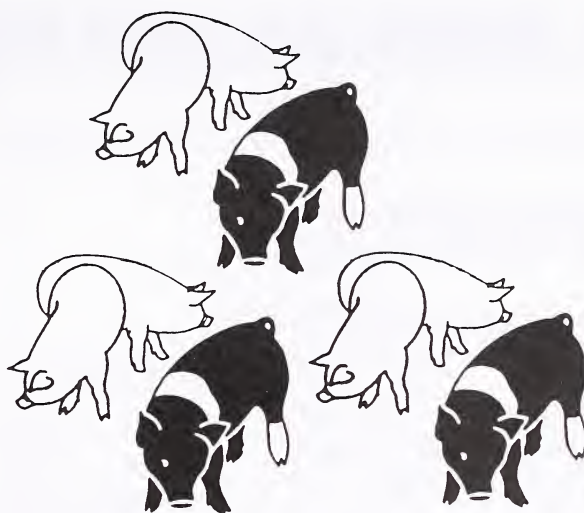
Six Bunnies



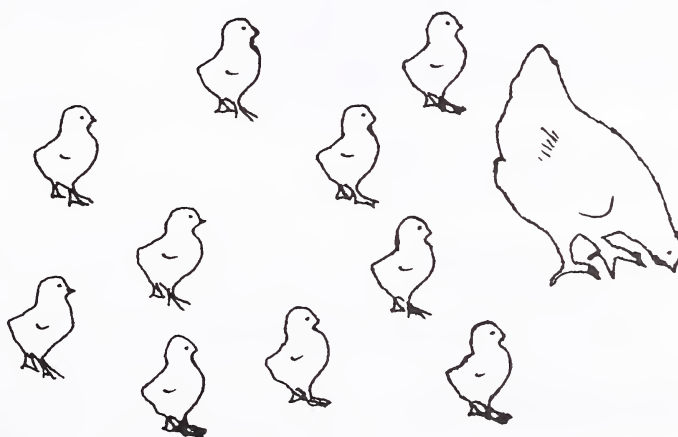
Seven Puppies



Eight Goslings



Nine Piglets

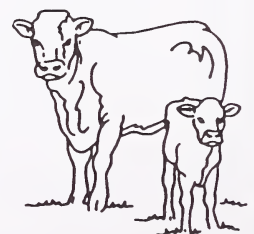


Ten Chicks



ANIMAL RIDDLES AND RHYMES

1. Even though my lamb's a bully
I love him 'cause his coat is _____.
2. I am a baby goat, nice and tame;
Sometimes people call you by my name!
What am I? A _____.
3. When I grow up I'm big and burly;
Even now my tail is curly.
What am I? A _____.
4. My coat is woolly, you'll agree;
Spell my name and you will see
A middle made of the letters e.
What am I? A sh _____ p.
5. Divide by 2 to get two halves;
Sometimes cows can have two _____.
6. When a big tractor engine starts with a bam.
"Baa, baa, baa, baa," says a little _____.
7. Kitty, kitty, you are so witty
You chased the mouse out of my _____.
8. Billy rode his little pony
Out to herd his calf
The pony was so rolly polly It really made me _____.
9. Piglet round, piglet fat,
Piglet please don't eat my _____.
10. Sheep dog, sheep dog you are so brave
How do you make that ram _____.



Activity 13



GUESS THE ANIMAL

STUDY QUESTION:

If you see part of a farm animal, can you guess which animal it is?

THE ACTIVITY:

In this activity children guess the animals in dot puzzles and write the names.

SUBJECT AREA:

Language Arts

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Recall information received orally: directions.

Understand ideas received visually: make predictions.

Use phonic analysis and context to identify words.

AGRICULTURE CONCEPTS:

Farm animals

PURPOSE

To introduce children to the animals commonly found on the farm and some that are a little uncommon.

To give children the opportunity to further develop their language skills while learning about animals of the farm.

MATERIALS REQUIRED:

Picture of farm animals. Supplied in this activity.

Animal puzzles. Supplied in this activity.

TIME REQUIRED:

1 class period.



PROCEDURE

Part One

Introduction

Have children choose an animal while one person is out of the room. Have them describe the animal to the person so that he/she can draw it on the board (can also be done in partners - one picks/the other draws on paper).

Part Two

Noting Details

Look at some pictures of farm animals, including both common ones, such as cows and chickens, and those seen less often, such as bees.

Part Three

Predicting

Have copies of the puzzles available for individual work. Ask the children to do the following:

- Predict the animal and write in the prediction.
- Complete the puzzle.
- Confirm or correct the prediction by printing a title or caption on the picture.

Part Four

Conclusion

At some point look at the completed pictures as a class, identifying each one orally.

FOR DISCUSSION

How does the farmer use the animals commonly found on the farm?

What are some uncommon animals that you have seen on a farm?

What kind of food do the animals eat?

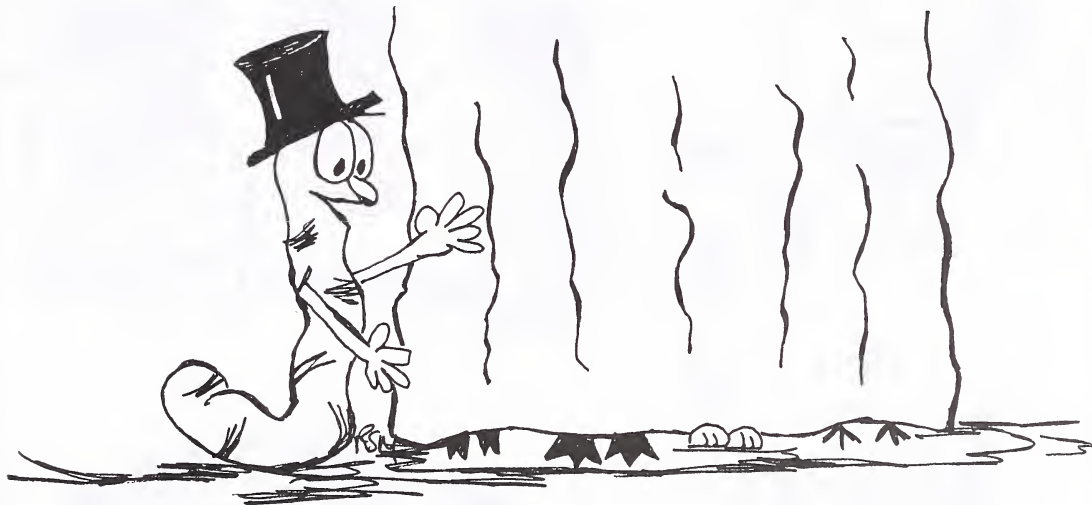
EVALUATION STRATEGIES Have children draw, name and define their favorite animal.

Have children play charades - one child or a group of children act out one farm animal while the rest of the class guesses the animal.

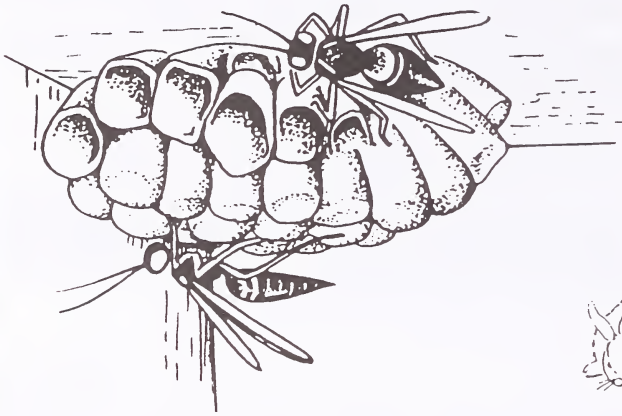
Use predictions and puzzles as a method of evaluation.

RELATED ACTIVITIES

1. Have the children color the completed animal drawings.
2. Read books or view films, if accessible, about farm animals - e.g. Phoebe and Judy Dunn. The Animals of Buttercup Farm. New York: Random House, 1981.



Farm Animals





Can You Name These Animals?





STUDENT RESOURCE

Can You Name These Animals?



Activity 14

ANIMAL HEALTH CARE



STUDY QUESTION:

How do farmers keep their animals healthy?

THE ACTIVITY:

In this activity children identify a few principles of health care for farm animals.

SUBJECT AREA:

Science

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Communicate orally: reports.

Demonstrate growth in thought processes by dictating explanations.

SCIENCE

Plants and animals: develop respect for living things; appreciate the importance of providing necessary care for living things.

AGRICULTURE CONCEPTS:

Animal health: health care.

PURPOSE

To introduce the children to the concept of health not only for people but also for animals.

To give children the opportunity to further develop language skills while learning how to care for animals.

MATERIALS REQUIRED:

Data sheet for listing health routines. Supplied in this activity.

TIME REQUIRED:

1 to 2 class periods.



PROCEDURE

Part One

Introduction

To introduce the topic of animal health, briefly discuss children's own health care - how often they see the school nurse or a doctor; why? - how they look after their own health through eating, sleeping, brushing teeth, cleaning and bandaging cuts. Have the children list their health care practices on the data sheet.

Reporting

Part Two

Dictating

Relate all of these experiences to the role of a farmer and a veterinarian. Make an experience chart about care of farm animals, noting that the farmer must provide the animals with appropriate food and shelter, carry out routine maintenance such as removing horns off goats or cows, clipping hooves of ranging animals or shearing sheep; also that the farmer must arrange for routine inoculations and for medical treatment when necessary - e.g. difficult births, infections, broken bones.

Part Three

Conclusion

Read the chart, emphasizing the comparison between health care of animals and people's health care and noting key words related to farm animals and health.

FOR DISCUSSION

Who do farmer's consult when an animal is sick?

How do farmer's care for their animals?

What kind of special care do dogs and cats need?

Do other animals need similar care?

Does diet play a big role in health care?

EVALUATION STRATEGIES

Have children write a story about an animal going to the veterinarian.

Have children pick an animal and then write down the steps of caring for this animal as an instruction guide to others.

RELATED ACTIVITIES

1. Have the children write and illustrate simple instructions for the care of an animal. Some children may have pets; others may choose to discuss a farm animal. Encourage the use of numbers to help organize the sequence of care activities. Share the individual tips on care of animals.
2. Have a pet in the classroom; make a poster that gives simple instructions for the care of a pet.





STUDENT RESOURCE

What Do You Do To Stay Healthy?

Explain how you and your parents look after your health.

1. Eat: _____

2. Sleep: _____

3. Visit school nurse, doctor, dentist: _____

4. What else? _____

Activity 15

COUNTRY FAIR



STUDY QUESTION:

What is your favourite farm animal?

THE ACTIVITY:

In this activity children make individual models of their favorite animals and display them in a classroom simulation of a country fair.

SUBJECT AREA:

Science

CURRICULUM CONCEPTS:

LANGUAGE ARTS

Use appropriate forms of oral and written language: report.

SCIENCE

Plants and animals: describe proper care of animals; appreciate importance of providing necessary care for living things.

AGRICULTURE CONCEPTS:

Country fair: farm animals; exhibit.

PURPOSE

To introduce children to the concept of participating, judging, and spectating at a country fair.

To give children the opportunity to further develop language skills as they learn.

MATERIALS REQUIRED:

Pictures and books about various farm animals.

Information about local fairs and exhibitions. (Consult local D.A. office for information.)

TIME REQUIRED:

3-4 class periods.



PROCEDURE

Part One

Introduction

To introduce this activity ask the children if they have ever been to a Fair or Exhibition and if there are any differences between a Rural and Urban Fair. Explain to the children that they are going to create a model of a Fair in the classroom.

Part Two

Preparation

Use pictures and information about local farms, fairs and exhibitions as references for the class fair. Have plain pipe cleaners, clay, toothpicks, cardboard, paper and glue available to the children. Group together children who are making the same kind of animal.

Part Three

Crafting

Have the children make their animals and have each group prepare a display. They could use toothpicks or cardboard for building pens; grass or paper strips for animal beds; and construction paper for making signs.

Part Four

Touring/Exploring

Have each group prepare to conduct a tour of their section of the exhibition, offering the rest of the class information about the special characteristics and care of their particular kind of animal. Encourage the children to jot down, as a group, some of the items they want to mention in their talks.

Part Five

Conclusion

Hold the tours - the fair! As a class, "judge" each exhibit by telling its creators something appealing about it.

FOR DISCUSSION

What kinds of facilities are needed for a Country Fair?

What special care must be taken of the animals before and during the fair?

Why do we have Country Fairs or Exhibitions?

How do you judge a competition at a Country Fair?

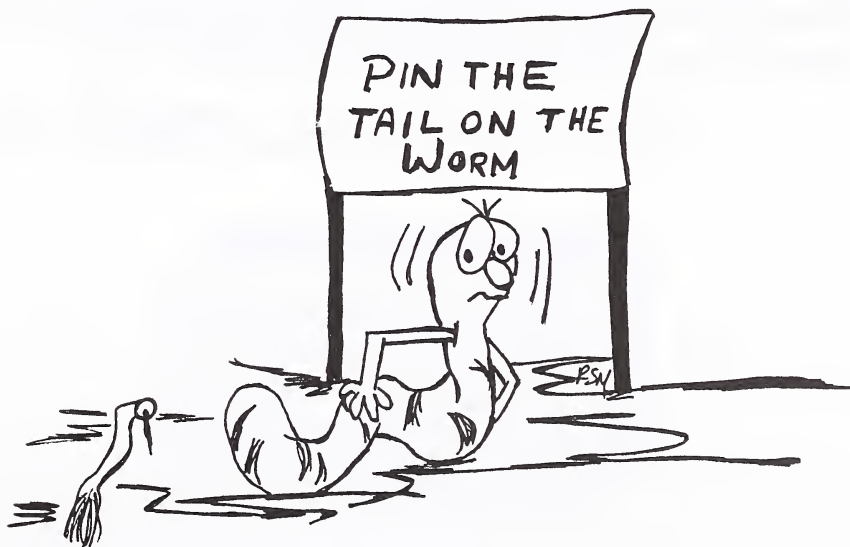
EVALUATION STRATEGIES

Have the children give their opinion of their own section based on originality, information, and construction. Then have them give their opinion on the whole country fair - what they liked/what they disliked. This can be written or oral.

Have the children write up a pamphlet advertising this country fair, which includes one or two lines about each section and a map of facilities.

RELATED ACTIVITIES

1. Have each group prepare copies of a simple brochure advertising their particular animal. The brochures could be available at the children's fair.
2. Make a class visit to a local country fair.
3. Open the fair to parents and the rest of the school. Invite a representative from a local agriculture society (e.g. Northlands in Edmonton) to judge the exhibits. Co-ordinate this activity with those of other classes doing agricultural projects - e.g. during annual agricultural week in March.



TEACHER RESOURCE



TROUBLE AT THE COUNTRY FAIR

One day Slide was reading the paper and he spotted an advertisement for a Country Fair. At that moment he decided to take his friend Rocky, the steer, into the Country Fair. The day of the Fair came very quickly, but Slide felt that Rocky and he were ready. They set out early that morning to get there on time for the show. However, when they arrived Slide realized that he really was not prepared. He saw people washing, brushing, feeding, and leading their calves and he had not done much of anything with Rocky. So Slide decided he would wash Rocky, but he ended up getting kicked. When he tried to brush his steer, it squished him against the fence. Actually, the only thing Rocky would do without hurting Slide was eat. Finally, it was time for the show, so Slide led Rocky into the ring, but Rocky got scared and started running around dragging poor Slide behind. Slide, beat up by the hard ground, finally let go of the rope that was supposed to control Rocky. He wriggled around dazed for a while because he was hurting all over his body. However, the worst part is that he wandered in front of the Pin the Tail on the Worm Stand.

author - C.G. Bibby

NOTE:

Teachers can ask children to finish the story by saying what happened to Slide after he went in front of the stand. In addition, teachers can use the children's conclusions as a method of evaluation.

**HI THERE EVERYONE!
SLIDE HERE ONCE AGAIN!**

I have gotten worn out by all this wriggling around,
so I am going to rest a while in my home underground.

Though I wish to say a few words before I disappear,
and tell you that someday soon I shall reappear.

I have to admit that I had my eyes opened wide,
by all the helpful information that I found inside.

I hope that you learned alot about AGRICULTURE,
and with me as you guide it was quite an adventure.

If you have any suggestions please do not hesitate,
and you can rest assured that I shall investigate.

Well, I guess it is now time for me to say 'Good-Bye'
to all of you, my new friends, with a tear in my eye.

SEE YOU SOON!

author - C.G. Bibby

Appendix A

Glossary

GLOSSARY

The words in this glossary are presented in categories related to the activities in the handbook. The explanations of the terms are not intended to be comprehensive definitions; instead our goal is to emphasize agricultural usage and especially to highlight the way the terms are used in this handbook.

ANIMALS

| | |
|------------------|---|
| animal | a living being that can move on its own - e.g. dog, horse, hog, etc. |
| bee | an insect which collects nectar and produces honey. Bees are housed in hives and farmers collect the honey. |
| broiler | a chicken or turkey raised for meat; killed at less than half mature weight. |
| brood hen | a chicken that is used to keep eggs warm for hatching. |
| bull | an adult uncastrated male bovine (cattle) used primarily for breeding. |
| calf | a baby cow or bull. |
| calve | to give birth to a calf (baby cow or bull). |
| cattle | more than one cow. |
| chick | a baby chicken. |
| chicken | a small bird kept for its eggs and meat (color varies). |
| coat | the external covering of an animal eg. mammals have skin and hair for a coat. |
| colt | a more specific term for a male foal. |
| cow | female bovine (cattle); some used for milk and some for meat. |
| donkey | an animal similar to the horse but has much larger ears and is smaller in size, which was used for many things in the past, but now is more like a pet. |
| duck | a web footed bird that is able to swim, that lives near water, and that feeds on various living things in the water - e.g. plants, bugs, etc. |
| ducklings | baby ducks. |

ANIMALS cont'd

| | |
|-----------------|---|
| filly | a more specific term for a female foal. |
| foal | 1. general term for a baby horse eg. the foal is running around the pasture. 2. to give birth to a baby horse eg. the mare is about to foal. |
| goat | a small animal used for milk, meat and in some cases wool. |
| goose | a long-necked water bird; feathers used for stuffing in pillows, quilts, jackets. |
| goslings | baby geese. |
| hatch | the emerging of the baby chick from the incubated egg. |
| heifer | a young cow that has not borne any (previous) calves. She remains a heifer until her first calf is delivered. |
| herd | a large group of cattle or goats. |
| hooves | hard horny feet on some animals - horses, cattle, goats, sheep. |
| horn | hard bony projection from the head of an animal. |
| horse | an animal which is used for riding or farm work; farm work includes stock handling and in the past pulling loads (draft). |
| kid | a young goat. |
| lamb | a baby sheep. |
| mare | an adult female horse. |
| mule | the sterile offspring of a horse and a donkey that is usually smaller in size and makes a different sound than a horse. |
| oxen | cattle used for draft purposes in pioneer days. |
| pet | an animal kept for the pleasure of its owner. |
| pig | a stout, short-legged hoofed mammal with bristly hair and a flexible snout that is raised mainly for its meat. |
| piglet | a baby pig. |

ANIMALS cont'd

| | |
|------------------|---|
| poultry | term used for farm birds - includes chickens, turkeys, ducks and geese. |
| rooster | an adult male chicken. |
| sheep | a very adaptable animal covered in wool, kept for its meat and wool. |
| sheep dog | a working dog used to control the herd (handling stock). |
| stallion | an uncastrated adult male horse used primarily for breeding. |
| steer | a castrated male bovine (cattle) used for its meat. |
| stock | animals kept on the farm for production purposes. |
| turkey | a large bird of the pheasant family, native to North America and kept for its meat. |

BUILDINGS OR AREAS

| | |
|------------------------|--|
| barn | a building used to shelter animals. This is usually totally enclosed. |
| bin | a storage building for grain or feed. |
| corral | a fenced-in area for animals. |
| dairy | a farm where cows or goats are kept for the production of milk. |
| elevator | a building or terminal where farmers bring their grain for storage - or where grain is elevated and transferred to an alternate mode of transportation: truck to rail; rail to ship. |
| farm | an establishment or plot of land where food products are grown. |
| farmstead | area that includes the human dwelling and other buildings which are often a part of a farm. |
| farmer's market | a place where farmers or producers sell their products directly to the consumer. |
| hatchery | a building that has specialized equipment for incubating and hatching poultry eggs. |

BUILDINGS OR AREAS cont'd

| | |
|--------------------|--|
| milk parlor | a place separate from the barn where cows are milked. |
| mixed farm | a farm which produces a variety of products for sale - e.g. grain and hogs. |
| modern farm | a farm which uses contemporary techniques and equipment. |
| pasture | an area of grassy land where farm animals range and feed. |
| pen | a stall for an animal. |
| shelter | a building or other structure which is used to protect animals from weather; animals usually go in and out on their own. |
| silo | storage building or pit in which green hay or high-moisture grains are fermented and stored as animal feed. |
| supermarket | a place where food produce and other items are on sale to consumers. |

EQUIPMENT

| | |
|--------------------|--|
| baler | a machine used to compact and package roughage such as hay or straw. |
| combine | a machine which moves down the grain field separating the seeds from the stems of ripe plants. |
| cultivator | an implement that digs deep into the soil which is used for breaking up land and ripping out weeds. |
| equipment | material or apparatus used in farm production and operation - e.g. machines, gas tanks. |
| grain auger | a machine used to move or elevate grain from one place to another - e.g. from a truck to a bin. |
| grain truck | large four wheeled vehicle with a strong frame used for hauling animals, grain and other things. This vehicle is used heavily at harvest time. |
| harrows | an implement used for light, shallow loosening of the soil, for preparing seed bed and for killing weeds. |
| incubator | an apparatus used to keep eggs warm while hatching. |

EQUIPMENT cont'd

| | |
|------------------------|--|
| machine | a mechanical apparatus used to assist the farmer with his work. |
| mechanization | the use of machines to replace hand labour. |
| milking machine | an apparatus which attaches to a cow's udder and sucks the milk into a holding tank. |
| salt feeder | a container used for giving animals salt and minerals. |
| seed drill | an implement used for planting the seeds in rows along the field. |
| sheep shears | clippers, usually electric, used to cut the wool from the sheep. |
| sprayer | an implement used to place a mixture of chemicals and water onto the crop that destroys the weeds, the bugs, etc., while feeding desired plants. |
| swather | an implement used to cut down grain or grass and place it into rows for the baler or the combine. |
| tractor | a machine used to pull implements and do other work on the farm - most common farm machine. |
| trough | a fairly large container for the drinking water or feed of farm animals. |

GENERAL TERMS

| | |
|---------------------|--|
| agricultural | anything having to do with farming (raising crops or livestock for food or fibre) or the agriculture industry which includes marketing, processing, and trade in these products. |
| commercial | an enterprise designed to generate income. |
| environment | the immediate surroundings of a plant or animal which influence its well-being. |
| exhibit | an article, plant or animal which is placed on display. |
| fair | a gathering where exhibits are displayed and judged. |
| rural | a place, person or thing which is related to the country or sparsely populated area. |

GENERAL TERMS

cont'd

| | |
|----------------|--|
| seasons | the natural times of the calendar year when weather changes affect the growing of plants and the behaviour of animals. |
| soil | earth - the top layer of the ground which supports the growth of plants. |
| sow | to place seeds into the ground for growth. (rhymes with low) |
| tillage | the operation of stirring, turning (plowing) or firming the soil to kill weeds or to prepare a seedbed. |
| urban | refers to city, town or densely populated areas in contrast to rural. |
| weather | the changing climatic conditions such as rain, sun, and temperature that affect agricultural production. |
| yield | the quantity of crop produced usually per unit area. |

PEOPLE

| | |
|-------------------|--|
| auctioneer | a person who solicits bids for and conducts a public sale of farm animals or equipment. |
| baker | a person who uses the products of farm plants, especially grains and oils, to produce bakery products for sale to retail or wholesale outlets and to consumers directly. |
| clerk | a person who works in a food store, bank, office or any setting where products or services are exchanged. |
| consumer | a person who buys things for his own use - usually items that he can't produce for himself. |
| farmer | a person who operates a farm. |
| farrier | a person who trims, cuts and fixes the hooves of horses and cows. This person also fits shoes on horses. |
| inspector | a person from a marketing agency or the government who evaluates a farming operation or product according to standard guidelines. |
| judge | a person who evaluates and scores or rates exhibits. |

PEOPLE cont'd

| | |
|---------------------|--|
| trucker | a person who transports animals or farm produce by truck to market, between farms, or to other destinations. |
| Veterinarian | a person who takes care of the medical needs of animals. |

PLANTS

| | |
|---------------------|--|
| barley | a grain used primarily for animal feed; also used for making beer. |
| canola | a pod crop whose seeds are used for making cooking oil. |
| cereal | refers to crops grown for grain - e.g. oats, barley, wheat, rye, corn; also a processed form of breakfast food. |
| chaff | the empty pods or scale-like seed covers which are separated from the grain in a threshing and cleaning operation. |
| chop | ground grain used for animal feed. |
| cleaned seed | seed which has been screened to remove weed seeds and chaff. |
| crop | plants grown for sale. |
| ear | the entire head of corn including the cob, husk, and silks. |
| fruit | the mature seed-bearing product of a plant - e.g. apple. |
| garden | a plot of land used to raise food-producing plants or for esthetic purposes - e.g. rose garden. |
| germination | the point at which a dormant seed begins to sprout, forming a new plant. |
| graded seeds | seeds evaluated and tested for size and condition and rated from good to poor. |
| grain | the edible seeds from grassy-like plants such as wheat, barley, oats, rye. |
| grass | a narrow-leafed plant which we grow on lawns and is used for pasture or grazing material for animals. |
| harvest | a time for collecting the produce from plants and animals on a farm. |

PLANTS cont'd

| | |
|--------------------|---|
| head | the portion of a plant which contains the seed - as in grain or grass. |
| kernels | the individual seeds from stalks of grain. |
| legumes | a group of plants that have large pods containing seeds that split when they are ripe; used for food and forage - e.g. peas. |
| moisture | (for germination) - the water required by a seed to sprout and later to sustain life. |
| oats | a grain used primarily for animal feed; some used for cereal. |
| plant | a living organism that usually has no locomotion; has roots, cellulose cell walls, and has capacity for indefinite growth. |
| pod | the container for seeds on a legume plant. |
| ripening | the process of maturing in plants resulting in seeds that are fully developed and can be used to grow new plants. |
| rye | a grain crop used for bread flour and to a large extent for animal feed. |
| seed | -the reproductive portion of a plant. Many seeds are used for animal and human food. |
| sprout | the earliest emergence from a seed as it begins to germinate or grow. |
| stalk | the straw or stem-like part of the plant that supports the seed head. |
| stem | the stalk of a plant. |
| temperature | a factor in the germination and growth of seeds. Most seeds have minimum temperature requirements for germination and growth. |
| vegetable | a plant usually grown in a garden for human food - e.g. potato and carrot. |
| weed | a plant that is not valued where it is growing, and that harms other more desired plants. |
| wheat | a grain crop grown mainly for milling into flour. |

PROCESS OR PROCEDURE

| | |
|------------------------|--|
| care | providing the necessities for a living thing - e.g. animals; food, water and shelter. |
| castration | the removal of testicles from male animals which is done for many reasons - eg. prevent fighting, increase weight gain. |
| churning | strongly stirring or agitating to combine or to separate a mixture (separate - milk to butter/ combine - flour and water to dough). |
| cultivating | the process of working up the land and digging up the weeds. |
| food processing | operations which are done to prepare food for storage or sale - e.g. canning, freezing. |
| growth | the development and maturing of a plant or animal. |
| harrowing | loosening the top soil to prepare it for the seeds and getting rid of any more weeds. |
| harvesting | the collecting of produce from a crop. |
| irrigation | providing extra water to growing crops in a dry area. |
| inoculation | using a needle to give an animal or plant a substance to prevent or cure disease; also introduction of selected strains of nitrogen-fixing bacteria into legume seeds. |
| production | the process of raising plants or animals and preparing them or their by-products for sale. |
| seeding | the process of putting seed in the ground to grow - sowing is a synonym of seeding. |
| spraying | sprinkling plants evenly with a mixture of chemicals and water intended to feed plants or prevent the development of weeds or insects. |
| stages | identifiable steps or degrees of development of plants or animals - e.g. seedling, growing plant, flowering plant. |
| swathing | cutting grain and leaving it to lie in rows on the stubble to dry. |

PROCESS OR PROCEDURE cont'd

| | |
|---------------------|---|
| threshing | the process of removing the seeds of a plant from the stalk and the shell or chaff. |
| weed control | the elimination of unwanted vegetation from a crop thus reducing the competition for nutrients and water. |

PRODUCTS

| | |
|-------------------|---|
| bread | a food baked from wheat and/or other grains and used most commonly for sandwiches or toast. |
| butter | a solid yellow substance of fat, air, and water made by churning milk or cream. |
| by-product | a substance which is used in addition to the main product - e.g. glue is made from animal hooves. |
| cereal | a processed mixture containing grain which is consumed as food. |
| cheese | substance made from milk solids. |
| cream | the yellowish part of milk containing 18 to 40 percent butterfat that is usually removed from the milk during processing. |
| egg | rounded hard-shelled body which can be used for reproduction or consumed as food; comes from poultry. |
| flour | cracked or powdered grain used in baking. |
| fresh | produce which has not undergone processing, such as freezing or canning, to change its form. |
| honey | a sweet liquid made in the hive by bees. |
| margarine | a product made of vegetable oil and milk that is used as a substitute for butter. |
| meat | animal tissue used for food. |
| milk | a white liquid produced by a mammal to feed its young. We drink milk of cows or goats. |

PRODUCTS cont'd

| | |
|----------------------|--|
| product | something produced through growth or labour - e.g. meat, vegetables, flour, tomato sauce. |
| vegetable oil | a fatty liquid made from the seeds or the fruit of mainly vegetables - e.g. corn, sunflowers, etc. |
| wool | the hairy coat on a sheep or goat used in the manufacture of garments. This is cut off each year. |

Appendix B

French Student Resource Sheets

Feuille de Travail pour la sortie éducative



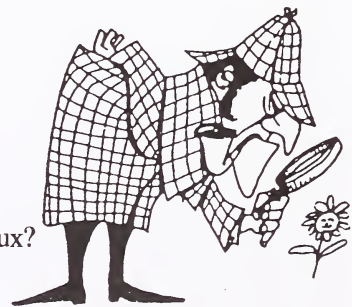
Première Sortie

Deuxième Sortie

| Date _____ | _____ |
|--|--|
| Saison _____ | _____ |
| Temperature _____ | _____ |
| Observations | Observations |
| | |

Elements d'Observation

1. A quoi ressemble la céréale de près?
2. Quelle est la distance entre les plantes?
3. Combien mesurent-elles? Touchent-elles à vos genoux?
4. Combien y a-t-il de tiges par plante?
5. A quoi ressemble la terre? Que ressens-tu lorsque tu touches la terre?
6. Que ressens-tu lorsque tu promènes ta main sur les plants de céréales?
7. Que ressens-tu lorsque l'on dépose une tête de céréale dans ta main?



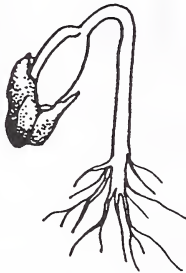
Mots Agricoles



Peux-tu compléter les mots reliés aux dessins?



_____ r a i n e



_____ o u s s e



B I _____

_____ l a n t e

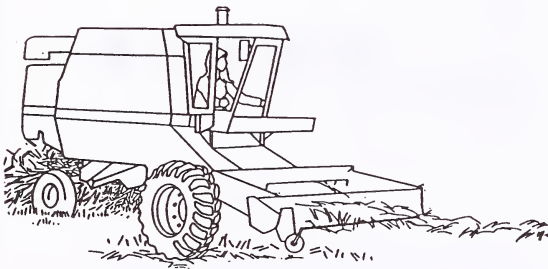


Mots Agricoles

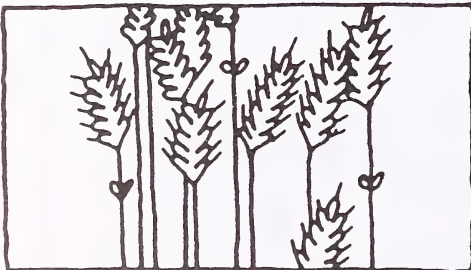


_____voine

_____réale



_____oisson



Cham_____de

ce_____eale

Noitre Histoire des Graines



Resume:

1. Nous avons mis dix _____ sur une serviette en papier mouillée.
2. Nous avons surveillé les graines chaque _____.
3. Nous avons conservé les serviettes en papier _____.
4. Les graines ont commencé à germer dans _____ jours.

1. Nous avons également déposé dix _____ sur une serviette en papier sèche.
2. Nous avons également surveillé ces grains chaque _____.
3. Après cinq jours, _____ de ces _____ ont germé.

Conclusions:

1. Après que les _____ ont été plantées seulement quelques unes _____.
2. Un fermier utilise les meilleures graines possibles afin que les céréales _____ bien dans son champ.
3. Les graines ont besoin d' _____ pour grandir.

Si le temps est sec, le fermier devra attendre la pluie qui aidera les graines à grandir.



La Croissance des Graines sur le Papier Mouillé

Première Journée (Lundi): Nous avons déposé les graines sur des serviettes en papier mouillées.

Deuxième Journée (): _____ graines ont poussé.

Troisième Journée (): _____ graines ont poussé.

Quatrième Journée (): _____ graines ont poussé.

Cinquième Journée (): _____ graines ont poussé.

Graines Sèches

Première Journée (Lundi): Nous avons déposé un tas de graines sur des serviettes en papier sèches.

Cinquième Journée (): _____ de ces graines ont germé.

ANIMAUX DE LA FERME



C H I E N C X T C D W Q E U M C F V B L
 A F H R N J Z A H K S P O I M O U T O N
 N Z O C H H E R E K E T D U M Q B J X Y
 E A A N S J C Q V P C T E F R S O T V Q
 T A Z B O M T L R J H E R D U E H Y O C
 O I E S K R E I E C U R M U S Z A E G H
 N L D N T O F S U U O H E B I R G I E A
 S K Q S A P E F A V B V Y H J E C O Z T
 S O S R O Q U U W E G C V X A F W L D N
 P R C W Y Q M J F M K H B Z T V A C H E

VACHE
 CANETONS
 TRUIE
 CHAT
 COQ

CHIEN
 OIES
 CHEVRE
 OEUF
 MOUTON

ANIMAUX DE LA FERME



S U E B D L T O N Y I W A N I M A L A X
 H I E H M T G H S I C K E R F Y Z Y N Q
 S A B E I L L E C E P O U L E V N O P X
 R P H Z E I Z F L Y I K V N L G E J A G
 D C B X L M T G R E P P O R C E L E T O
 M H Q I H Z P T R S R B I F Y T C K U J
 T E V L B F U L C A N W Q O S G E X R C
 Q V K J N A Z T I E N C L O S M D Y A F
 T A U R E A U S A N V G I O E S X E G N
 C L S J D N J C D O P K E R Z T I H E Q

CHEVAL
 ANIMAL
 MIEL
 TAUREAU
 PORCELET

POULE
 ABEILLE
 ENCLOS
 GRANGE
 PATURAGE

PAROLE DES FERMIERS



U T R A C T E U R O Q Y C L S O F X I T
 T R D W A E M F K G L B H R N J Z A K E
 S Z P O M I I F V B Q H L G C W H E R M
 K C T O I E M F O R E U S E N S J P C P
 E B R F O I Q V Q A Z A G B E F B O M S
 T L O J N I D D U S T T O N W C P K R F
 Y A B L Q E O I S C O R M T S Z E A U R
 R E C O L T E U O H Y L G I W E C P R A
 V L G B Z C T B L E B X M J A V O I N E
 S L E G U M E X A W L G D N P R C Y S Q

TRACTEUR
 EAU
 BLE
 SOL
 AVOINE

CAMION
 RECOLTE
 FOREUSE
 TEMPS
 LEGUME

PAROLES DES FERMIERS



M J F A U C H A G E A Z K F E R M I E R
 U M E R D B E S P C L T O M V I W X A H
 I O E R J T G H M O I S S O N N E U S E
 R I F O C M Q Z S U L D T E B S A B V W
 N S O S Z G U P H Q O R P Y G Y A N G Q
 G S D A X R A O C E R E A L E Q E X C H
 K O J G E A A T Z I G G V L A B A W T C
 O N S E S I O O H Z E C P M S N R E A F
 Y I B U D N T S A N V W I O S X T E N K
 C O S J E E G P K B R Y M L E E S E B T

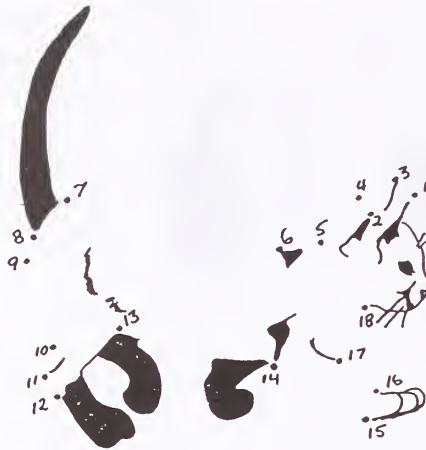
FERMIER
 MOISSON
 FAUCHAGE
 ARROSAGE
 CEREALE

TETE
 GRAINE
 MOISSONNEUSE
 PLANTE
 ORGE

Peux-tu nommer ces animaux?



Peux-tu nommer ces animaux?



Que fais-tu afin de garder la sante?



Explique comment tes parents et toi prenez soin de votre sante.

1. Diete: _____

2. Sommeil: _____

3. Rendez-vous chez l'infirmiere de l'ecole, le medecin, et le dentiste:

4. D'autre?: _____
